

Deadline 3 15 February 2019

I write in response to the DCO application made by RiverOak (RiverOak Strategic Partners) and wish to submit my objection to that application. I am a local resident of Ramsgate and live close to the airport on the Nethercourt Estate.

I have read much of the documentation supplied.

Having considered their proposals to resurrect a failed and abandoned airport at Manston and turn it into a freight hub I wish to object to their proposals as being unrealistic and detrimental to the wellbeing of the local residents of Thanet. I cite the following reasons for my objection.

RSP claim a minimum increase of freight movements to 10,000 atm's per year but also claim having a design capacity of 83,220¹. Reaching that figure they fail to include the three aprons designated for passenger services. Using RSP formula $3 \times 12 \times 365$ this would add 13,140 potential passenger flights (dependant on turn round time which can vary from 25mins to 2.5hrs²). Neither do they account for General Aviation flights. None of these measures would limit the number of flights, which could increase provided the overall noise emissions remained within the assessment, i.e. there could be many more than 17,170 flights provided that they were as quiet or quieter, and could reach the physical capability of the proposed airport development set out above. The assessed number of 17,170 flights³ (year 20) is therefore not, and is not likely to become, a cap on the capability of the Proposed Development⁴. The application does not contain a cap on the number of aircraft movements. It makes one wonder at what point a Public Safety Zone would be needed?⁵

RSP also claim an increase of job opportunities to 30,326 by year 20⁶. In 2000 Wiggins forecast the airport would employ over 2,500 staff and by 2020 it could be as many as 10,000. They estimated indirect and induced Jobs could rise to 6,500 by 2010 and 24,000 by 2020.⁷ When the airport closed in 2014 it employed less than 150 people.

¹ Updated 2.3 NSIP Justification Para 23-24

² Travel truths Turnaround times Daily Telegraph 27 March 2018

Airplane Boarding Strategies for Reducing Turnaround Time 18th Int Conference on Transport Science 2018

³ Azimuth Report Vol 3 Table 1

⁴ Updated 2.3 NSIP Justification Para 33

⁵ Dept of Transport Control of Development in Airport Public Safety Zones Para 3

⁶ Azimuth Report Vol 4 Table 3

⁷ 5.3 Rail, Airports and Ports Select Committee Executive Summary Sept 2002

Wiggins anticipated freight to rise to 200,000 tonnes by 2005, with a potential for 350,000 - 400,000 by 2015. By 2010 this could provide some 6,000 jobs at Manston Airport¹. Again Wiggins failed to reach these figures.

A common thread throughout all these claims points to the involvement of one person whose name, Tony Freudmann, runs through events like a stick of seaside rock. He was described as Senior Vice-President for Wiggins during a bitter dispute in 2003 between Liverpool City Council and Wiggins over development of land formally used for the Liverpool International Garden Festival in 1984².

Tony Freudmann was Senior Vice President of Planestation / Wiggins Group between 1994 and 2005³. Then they were pitching to buy up to 20 airports in the United States in 1999⁴ including Smyrna Airport, Tennessee and Melbourne International Airport Florida.

Wiggins Group also claimed involvement in the development of various airports in Europe⁵. These included Odense Airport, Denmark. Pilsen Airport, Czech Republic. Lahr Black Forest Airport, South Germany. Schwerin-Parchim Airport, North Germany. Cunco-Levaldigi Airport Italy. Ajman Airport United Arab Emirates. and Borgond Airport, Hungary⁶. During this time it was stated, the ideal airports are former military bases or those with disused or under-utilised facilities with ample availability of surrounding land which can be developed using the real estate experience of the Wiggins Group⁷. None of these ventures prospered. Wiggins, by now called Planestation went into administration in July 2005 and Manston was bought from the administrators for £17million by Infratil.

Tony Freudmann was Airport Manager at Manston 1999-2005⁸ and still involved in Manston Airport under the ownership of Infratil. He was Chairman of aviation consultancy firm Freudmann Tipple International promoting direct flights between Manston and Norfolk, Virginia, scheduled to launch in 2007⁹. None of these flights took place. *28th Feb 2007, BBC report; Plans to run transatlantic flights between Kent and America have been scrapped because of poor ticket sales. The weekly service to Norfolk, Virginia was supposed to take off from Manston International Airport in May. But package holiday*

¹ Rail, Airports and Ports Select Committee Airports Interim Report Vol 2 Sep 2002 Para 3.2

² Horticulture Week website 4 Dec 2003

³ KCC Report March 2015 Manston Airport under private ownership Chap 2

⁴ Private Ventures Airport Business Aviationpros website

⁵ Private Ventures Airport Business Aviationpros website

⁶ Managing Airports by Anne Graham Pages 49-52

⁷ Managing Airports by Anne Graham Page 50

⁸ Manston Airport Consultative Committee Minutes

⁹ Kent Messenger KentOnline 2006

company Cosmos decided to cancel the planned flights after selling just 10% of the available tickets. Cosmos said the 800 passengers who had booked the service would get a full refund or be offered another holiday.

Freudmann continued to be involved in events beyond the closure of the airport as spokesperson for the American company RiverOak Investment Corp. and was involved in the two failed attempts to obtain a Compulsory Purchase Order with Thanet District Council. He continues now as Director of the UK company RiverOak Strategic Partners Ltd as they pursue a DCO.

I do not believe RiverOak Strategic Partners Ltd (RSP) to be a viable company to be involved in the application for a Nationally Significant Infrastructure Project via a Development Consent Order. The company is a recently formed¹ “off the shelf” company and has no track record of business history or financial statement of viability. The company appears to have been created solely as a vehicle for this application². *Quote; The applicant is RiverOak Strategic Partners Ltd (‘RiverOak’), an investment company formed with the intention of promoting and securing a Development Consent Order (DCO) for the project. The project was formerly promoted by RiverOak Investment Corporation, a US company registered in Delaware, but in December 2016 an agreement between the two entities transferred all responsibility, right and liabilities in relation to the project from the US to the UK company. RiverOak Strategic Partners Ltd now appear to be subject of a Change of Relevant Entity (RLE) registered at Companies House³.*

RiverOak Strategic Partners have no office and no identifiable employees. It is little more than a file in a solicitors office. In a recent interview when asked about his role in the company ██████████ said, *Quote; “We don’t have an office. I don’t have a typical day. I have a home office. I email, make phone calls, run reports, write documents etc. The days that I have meetings, we use the offices of our retained law firm in central London. There can be up to 30 people at these meetings. We also have meetings with potential users of the airport. There are also many meetings with the government. I send a lot of my time in London, but the airport is 70 miles away from where I meet with supporters”⁴.*

The company was formed when RiverOak Investment Corp., LLC pulled out last year following two failed applications for a Compulsory Purchase Order (CPO) with Thanet District Council (TDC)⁵. First under Labour control and secondly under Ukip control. *BBC News Kent reported in Oct 2015 “A council has rejected plans for it to buyout Manston Airport, going against a*

¹ Incorporated 8th July 2016

² 3.2 Funding Statement APP-013) 5

³ Companies House Riveroak MSE Ltd. Riveroak AL Ltd. & Riveroak Operations Ltd.

⁴ ideamensch.com interview platform for entrepreneurs. Interview 24 Jan 2019

⁵ House of Commons Transport Committee. *Smaller Airports Ninth Report of Session 2014-15 Para 47*

key election pledge. Thanet District Council voted against proceeding with the Compulsory Purchase Order (CPO) that was backed by US firm RiverOak, during a noisy meeting. The cabinet's decision followed legal advice from lawyers representing the council”.

By their own submission 90% of the company is owned by an offshore company, M.I.O Investments based in Belize. They in turn are owned by Helix who are now given as guarantors for the money necessary to fund the DCO application, a sum of £15 million. Again, by their own submission £9 million has already been spent to reach this stage of the application¹. *Quote “M.I.O Investments Limited has been established by our investors as a specific funding vehicle for their financial interests in the Manston project, which is standard practice. MIO Investments Limited is a company registered in the Commonwealth territory of Belize”.*

In their reply to funding statement to ExA - Further information in respect of RiverOak Strategic Partner's (RSP) accounts, shareholders, investors and proof of assets.

As a special-purpose vehicle, RSP does not generally have funds or assets and does not engage in transactions such that it has accounts. The owners of RSP are RiverOak Manston Ltd, a UK registered company of which Lawlor, Yerrall and Freudmann are directors and MIO Ltd, a Belize registered company. As mentioned above, following completion of the restructure, further information will be provided at Deadline 3.

The estimated cost of construction is given as £300 million with £7.5 million shown as the cost of the land following the grant of compulsory acquisition and £5.6 million to address noise mitigation claims. £7.5 million seems an undervalue considering Infratil bought the airport from Planestation administrators for £17 million in 2005².

They show no evidence of having £300 million available to fulfil the construction should the DCO be granted. They make vague reference to significant interest from institutional investors without showing any guarantee or evidence of available funding or any commitment from investors willing to fund this project ³.

To be a viable company for any project of this size it would be usual for the company to have a proven track record of managing large infrastructure projects like McAlpine, Costain or Balfour Beatty with annual turnover of £millions and evidenced proof of delivering large scale projects, compare other current DCO applicants. Alternatively a company with a proven track

¹ Funding Statement APP 3.2 *The Formation and Funding of RiverOak Strategic Partners March 30th, 2017*

² *Financial Times 25 Aug 2005*

³ Funding Statement APP 3.2

record of running an airline business or history of freight handling. RiverOak fail on both counts.

They do claim “RiverOak’s directors have, between them, experience of multiple historical airport capital markets infrastructure financings, in the US and elsewhere”. One of the directors listed is a Tony Freudmann who raises concern locally. He is well known in the area as having been involved with previous failed attempts to regenerate this and other airports dating back to the days of Wiggins Group PLC and Planestation 1998-2005¹.

I do not believe regenerating a closed airport with a history of business failure qualifies as a Nationally Significant Infrastructure Project. I see Crossrail qualifying, or building the M25, or the East London River Crossing, or even HS2. Trying to use the DCO procedure as a tool to compulsory acquire a brown field site falls far short of this criteria and is nothing more than a land grab.

The area has experience of inward investment that comes to nought before. In 2007 31 hectares of land between Manston Business Park and Acol was due for development to be known as The China Gateway with 1329 jobs promised². Nothing came of it but councillors enjoyed a nice trip to China.

In 2014 Sir Roger Gale MP raised the subject of the airport in Parliament. The Under-Secretary of State for Transport replied “The Government are unable to intervene directly in the case of Manston. It is ultimately the responsibility of the airport owner to determine whether or not it is commercially viable”.³ As Sir Roger Gale MP is President of the All Party Parliamentary Group on General Aviation It could be argued that he has a vested interest in promoting aviation in preference to the best interests of his constituents. Likewise, Craig Mackinlay MP who is also a member of the APPG failed to declare his interest to Parliament in MAMA Airlines Ltd, contrary to Para 13 House of Commons’ Code of Conduct for which he was required to apologise to the House⁴.

The Government’s view is one of tacit support for the return of aviation operations but has insisted that it is a matter for the local community, the owners and the local authority.⁵ Perhaps then Manston is not a suitable venture for a DCO application.

¹ Manston Airport under private ownership KCC March 2015

² *Thanet Council Full Council Minutes 9th Oct 2008*

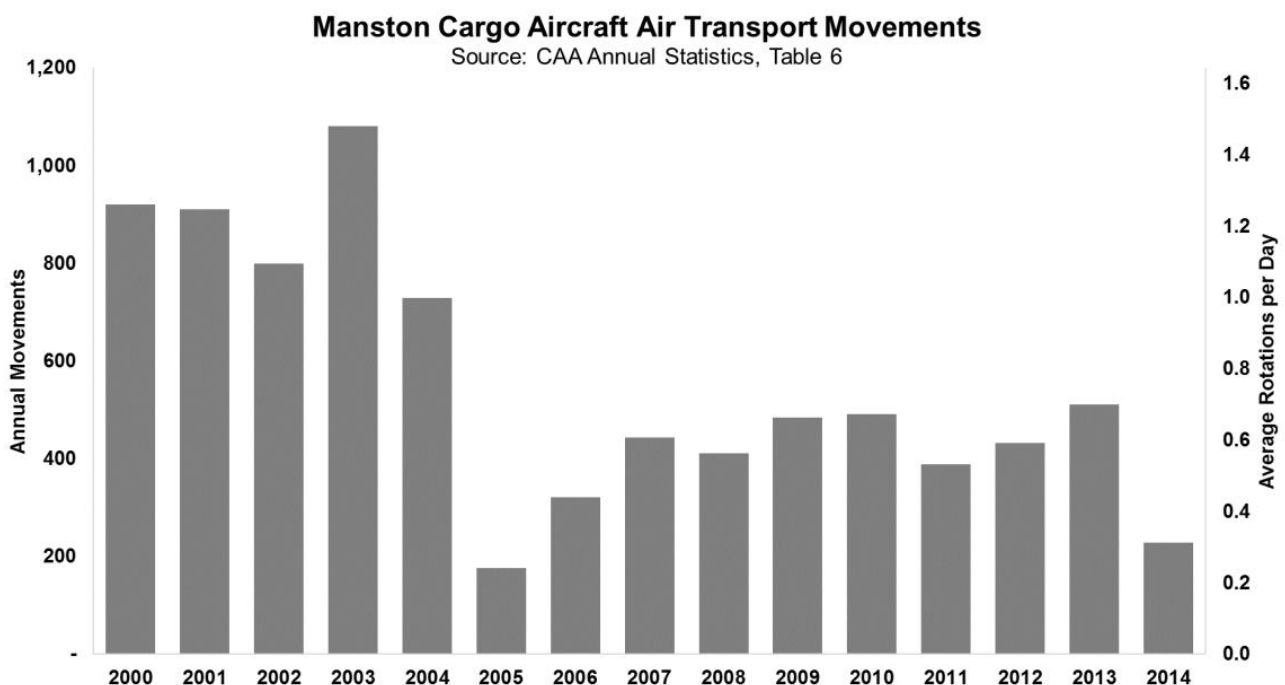
³ *House of Commons Hansard column 678 28 April 2014*

⁴ *Parliament UK/documents/pcfs/rectifications/CraigMackinlay*

⁵ *Airports in the South East of England Chap. 8 Commons Briefing Paper June 2018*

RiverOak’s presumption of their project qualifying is flawed. They have put forward claims to generate 10,000 cargo movements per year. I feel this figure has been put forward by RSP solely to fulfil the requirements of the DCO, and that purpose alone, and bears no relationship to achievable reality in freight demand at Manston.¹

When it was open Manston Airport already had a capability of handling thousands of air traffic movements but failed to attract anywhere near its maximum number.² The capacity was already available whether used or not. For RiverOak to claim they are to increase the capacity from zero to 10,000 is disingenuous at best and hinges on whether the closed airport is or is not already an airport. They argue their proposals are an alteration of an existing airport which supports the argument that the airport already had a sizeable capacity.³



Manston cargo only aircraft movements⁴

CAA figures show freight tonnage per year

- Part 2014 12,696 tonnes**
- All of 2013 29,306 tonnes**
- All of 2012 31,078 tonnes**
- All of 2011 27,495 tonnes**
- All of 2010 28,103 tonnes (down 6% on 2009) 1.2% of UK total**
- All of 2009 – 30,038 tonnes (1.47% of the UK total)**

¹ *Planning Act 2008 Part 3 Sec 23*

² *Commercial Viability of Manston Airport (Avia Solutions) Sept 2016*

³ *2.3 NSIP Justification APP-008*

⁴ *Altitude Aviation Report*

Analysis of the freight market potential of a reopened Manston Airport Jan 2018 Para 166

All of 2008 – 25,673 tonnes (1.12% of the UK total)
All of 2007 – 28,371 tonnes (1.22% of the UK total)
All of 2006 – 20,841 tonnes (0.9% of the UK total)
All of 2005 – 7,612 tonnes (0.32% of the UK total)
All of 2004 – 26,626 tonnes (1.12% of the UK total)
All of 2003 – 43,026 tonnes (1.95% of the UK total)
All of 2002 – 32,240 tonnes (1.47% of the UK total)
All of 2001 – 35,521 tonnes (1.66% of the UK total)
All of 2000 – 32,239 tonnes (1.38% of the UK total)
All of 1995 – 5,073 tonnes (0.29% of the UK total)¹

Various claims and projections are made by RiverOak which, at best, I view as aspirational or based on wishful thinking with no grounding in reality. As already mentioned such projections were put forward back in 1998-2002 and again in 2008-2009 when they then estimated throughput of up to 6 million passengers per annum and up to 400,000 tonnes of freight per annum achievable at the airport by 2015. None of this has been achieved.

Turning to the DCO application itself. The documentation claims the airport is located 4km from Ramsgate, this is misleading. Measuring from the eastern end of the runway using an Ordnance Survey map 4km would place you at the harbour at the extreme eastern side of Ramsgate. Ramsgate has seen a great deal of development since the airport was first established and the western edge of the town (Nethercourt Estate) is less than 1km from the runway and less than 500 metres of the eastern boundary. As the population of Ramsgate is now between 40,000 and 50,000 that is a lot of people being adversely affected by RiverOak's plans. *(TR020002/ APP/ 5.2-15 para 4.2 & Site map Fig. 4.1 APP-060) (Para 1.04 Introduction design and Access Statement 7.3 APP-081) The application site is on the existing site of Manston Airport, west of the village of Manston and north-east of the village of Minster, in Kent. The town of Margate lies approximately 5km to the north of the site and Ramsgate approximately 4km to the east. Sandwich Bay is located approximately 4-5km to the south-east.*

A planning application has already been approved for the Manston Green development in the Haine Road area with 700+ homes proposed, putting them even closer to the airport boundary. As part of that Manston Green development approval has been granted for a link road to be built from the Lord of the Manor roundabout to Manston Road. This link would cross the land RiverOak are seeking to compulsory acquire².

Due to the close proximity of Manston airport to the heavily populated area of Ramsgate the proposals to develop it into a major freight hub with

¹ Civil Aviation Authority Historical Data

² (TR020002/APP 4.2 Land Plans plots 060 - 067) (Planning OL/TH/14/0050)

ancillary businesses is wholly inappropriate for the area. RiverOak themselves discounted Biggin Hill Airport due to the proximity to a residential area far smaller than Ramsgate¹. An airport freight hub would require a central location. Sadly Manston is located at the extreme eastern edge of Kent on a peninsular with only one exit route out to the west.

It is disappointing and worrying that RiverOak themselves state that areas of Thanet will be blighted by noise, most notably Ramsgate, Manston, and Cliffsend. In mitigation they offer the prospect of flights taking off to the west and landing from the west so avoiding overflying the heavily populated Ramsgate town. They do add “weather permitting”. As the prevailing wind is predominantly from the west and aircraft usually prefer to land and take off into the wind I doubt their offer will have much impact on normal practice².

They state noise will be monitored from noise monitoring stations 6.5 km from “start of take off role”. That indicates the monitoring stations will be located at or near Ramsgate Harbour to the East and St Nicholas Roundabout to the west³. This is well away from the airport and places Ramsgate wholly within the monitored area and so will be subject to higher levels of noise than the monitoring stations will record.

(2.4 Noise Mitigation Plan Para. 11 Aircraft noise monitoring) APP-009

11.1 Permanent fixed noise monitoring terminals will be located under each of the aircraft departure flight paths at a distance of 6.5km from the start of take-off roll.

While RiverOak have been keen to play down the need for night flights and put forward the prospect of a maximum of 8 flights per night. They claim that figure is only put forward as a requirement laid down by the Planning Inspectorate. This is a claim refuted by the Inspectorate.

A cursory look at the allocated noise classification of various aircraft shows a varying Quota Count from 0.25 to 16, other aircraft are exempt due to them having noise levels less than 84 EPNdb⁴. With a total Night Time QC of 3,028⁵ between 2300 to 0700, depending on the aircraft used, could mean many more flights than the eight flights suggested. While RiverOak state aircraft with a QC of 8 or 16 will be prevented from using the airport during night time hours that still leaves open the prospect of aircraft landing or taking off at Manston with a decibel level up to 98.9 EPNdB. For comparison Luton has a night time noise limit of 80 dB. Luton also has a much lower night time QC of 2,645. Heathrow has a QC of 5,100, 4,080 Summer and 2,550 Winter. With a movement limit of 3250 summer and 2,550 winter. They

¹ Azimuth Report Vol 1 Demand in the South East Table 3 South East airfields

² RSP 2.4 Noise Mitigation Plan Para 9 APP-009

³ RSP 2.4 Noise Mitigation Plan Para 11 APP-009

⁴ RSP 2.4 Noise Mitigation Plan Para 1 APP-009

⁵ RSP 2.4 Noise Mitigation Plan Para 1.6 APP-009

allow no scheduled freight flights in Night time quota period 11.30pm to 6am. The quota count is balanced with a movement limit so quieter planes will hit the movement limit and noisier planes will hit the QC limit. Due to the planned expansion of Heathrow there is a consultation currently taking place to introduce a scheduled night flight ban¹.

The Aviation Environment Federation prepared a briefing paper for MP's on the Night Noise Quota Count Scheme to coincide with the Civil Aviation Bill in October 2005. The paper pointed out numerous shortcomings. Mainly noise is averaged out over a period of time rather than measuring the peaks as aircraft take off or land. If planes rated 96 EPNdB were replaced with planes rated at 95 EPNdB, twice as many could be flown during the restricted period. It is therefore imperative that ATM's are limited rather than rely purely on a Quota Count².

To pacify local residents likely to be affected by the significant adverse effects on health and quality of life due to excessive noise RiverOak propose to offer a noise insulation scheme. Those deemed eligible will receive £4000 as a one off compensation payment³. They do not say how residents affected will be identified. How will noise nuisance be monitored if the monitoring stations are further away from the airport than the affected homes?

RiverOak identify up to 115 residential dwellings are forecast to be exposed to significant noise and disturbance in the first year of operation, rising to 225 dwellings in year twenty. Who qualifies for the insulation scheme? At the consultation they were unable to identify these properties.

Nearby homes will also be affected by light pollution from runway lights and other ancillary lighting being illuminated overnight. The airport is located at the highest point in Thanet so the light pollution will intrude over a large area particularly towards Minster and Pegwell Bay.

We are expected to believe they will generate 30,000 jobs by year 20, with 4,200 employed directly at the airport and a further 26,000 indirectly in the wider economy. Nowhere is this quantified. They further claim that by the fifth year of operation they will be handling more than 10,000 cargo movements together carrying 180,000 tonnes of inbound and outbound freight. They fail to quantify where this business will be coming from. Unless they intend to coax freight handlers to transfer their operations from East Midlands airport to Manston. To do that they will need to offer reduced rates

¹ Heathrow Aircraft Noise Website Night Flights

² Night Noise Quota Count Briefing Paper by Aviation Environment Federation (AEF) 21 Oct 2005 ERCD Report. Review of the Quota Count (QC) System Civil Aviation Authority Nov 2002

³ RSP Noise Mitigation Plan Para 2

or night flights. As they have repeatedly stated that night flights will not be required it is hard to see how they will otherwise compete with an established operation elsewhere with far better supporting infrastructure.

Some of the claims put forward by RiverOak support passenger flights more than freight but they also claim passenger services will be a secondary consideration. They claim there is a market to fly passengers from America to link with cruise ships operating out of Dover. This was tried by Wiggins and failed. They do not state which airport they will use in America nor why Americans would chose to fly to Manston to join a limited number of cruise opportunities from Dover when they have the Caribbean on their doorstep.

They also claim the Paramount Development at Dartford will rival Disney resorts as a tourist destination attracting more passengers to Manston. That development, now called The London Resort, is still struggling to submit a DCO application after Paramount Pictures pulled out of the enterprise and now has an opening date pushed back to 2024¹ at the earliest.

With the recent collapse of Monarch Airlines (2017), Air Berlin (2017) Centurion Cargo (2018) Primera (2018), Cobalt airlines (2018) and Germania (2019) all having failed during this consultation period, followed by the Ryanair pilots dispute and Flybe being in financial difficulty and Norwegian Airlines facing a buyout it is clear passenger services are volatile and are not to be relied upon. The airline industry is in turmoil. In 2017 too many airlines flying too many aircraft chasing too few passengers².

General air cargo forms the majority of air freight being shipped to and from the UK and is shipped predominately using passenger bellyhold capacity. Airfreight accounts for less than 1% of freight movements worldwide. With 98% shipped by sea³.

Heathrow is by far the largest general air freight market using the forwarder business model and the overwhelming majority of cargo is transported in the bellyhold of passenger aircraft, mostly on long-haul routes. East Midlands, by contrast, is dominated by express freight using the integrator business model, with freight carried in freighter aircraft, often overnight on routes to mainland Europe, but also on intercontinental routes. Stansted has a combination of integrators and other freighters, while Manchester is largely bellyhold, although on a much smaller scale than Heathrow⁴.

¹KentOnline article 7th Nov 2018

² *The Times Business section 5th February 2019*

Ryanair nosedives into €20million loss as airlines fear storm.

³ *Steer report 2018 Assessment of the value of air freight services to the UK economy*

⁴ *Steer report 2018 Assessment of the value of air freight services to the UK economy*

Night operating restrictions, based on movement limit and noise quota systems, are currently in place at Heathrow, Gatwick and Stansted. The current restrictions to October 2022, are summarised for current and future seasons in Table 2.1. The restrictions apply from 11:30pm to 6am, with less stringent restrictions also applying between 11pm and 11:30 pm, and between 6am and 7am.

Table 2.1: UK airport night-time operating restrictions

Airport Seasonal Movement Limit	Winter (2018/19 - 2021/22)	Summer (2019-2022)
Heathrow	2550	3250
Gatwick	3250	11200
Stanstead	5600	8100

Source: DfT

There is also an additional noise quota limit incentivising the user of quieter aircraft¹.

The express business model is dependent on being able to ship goods during the night to enable maximum productivity for customers who rely on shipments being picked up close to the end of the working day and delivered as early as possible the next².

Containerisation transformed the freight industry with most freight now moved by sea (98%), rail or road and easily transferred between each mode of transport. Sadly, airfreight did not benefit from containerisation. The express business model is dependent on being able to ship goods during the night to enable maximum productivity for customers who rely on shipments being picked up close to the end of the working day and delivered as early as possible the next. Most airfreight is now moved as belly-hold cargo in passenger flights. Heathrow accounts for 70% of air freight in the UK and 95% of cargo through Heathrow flies belly-hold in passenger aircraft³.

Cargo volumes at Amsterdam Airport Schiphol decreased 2.5% in 2018 with increased belly cargo making up for declining freighter traffic. Schiphol handled 1.7 million tonnes of cargo in 2018, with belly cargo increasing 4.1% while full freighter volumes were down 7% with full freighter movements decreasing 10.4%⁴.

¹ Steer report 2018 Assessment of the value of air freight services to the UK economy

² Steer report 2018 Assessment of the value of air freight services to the UK economy

³ Boeing; World Air Cargo Forecast 2016-2017. Our Cargo Strategy: Heathrow Cargo

⁴ Air Cargo News 31 Jan 2019

The share of total volumes carried by freighter aircraft has fallen from over 35% in 2002 to under 30% in 2017 and has fallen away significantly at some airports. The market for dedicated freighter services has struggled globally since the financial crisis due to falling sea-freight rates and the continued rise of air passenger demand (and associated bellyhold capacity), which have driven down freighter yields¹.

RiverOak have no plans to challenge Heathrow for belly-hold trade but is relying instead on attracting dedicated cargo aircraft. This restricts them to a niche market for time sensitive, perishables or high value items where cost of transport is not the determining factor.

The only other bulk carriers for airfreight are the postal service or parcel delivery companies like UPS, Fedex, DHL, TNT, and Amazon. These are already well established at East Midlands Airport (307,242 tonnes 2014²) or Stanstead (207,996 tonnes 2015³) where warehousing and supporting infrastructure is already in place. With capacity to expand and a ready link to road and rail. Forecasts show that East Midlands could achieve a passenger throughput of 10 million passengers a year in the period 2030 – 2040 and a cargo throughput of 618,000 tonnes during the same period⁴. Stanstead to invest £600 million over next five years⁵ to cater for 43 million passengers.

RiverOak claim without being granted a DCO the future of the airport is one of slow decay and abandonment. They fail to mention that the owners, StoneHill Park, have already submitted plans for a mixed use development of up to 4,000 new homes with supporting infrastructure and sporting facilities. This alternative option is in line with current Government priorities to build more housing⁶. *Stone Hill Park; Our proposed new settlement will not only answer Thanet's growing housing needs, but deliver thousands of jobs and put Manston on the map as a regional sports and leisure destination. From a new country park to an improved aviation heritage component, our proposals will open a successful new chapter for Manston and a prosperous one for Thanet.*

Since the closure of the site most of the equipment, landing lights, radar, fire trucks, baggage conveyor belts, x-ray scanners, fork-lifts etc., have all been removed and sold off⁷.

The airport no longer holds an airport licence and they will need to reapply for this and other consents prior to bringing the airport back into aviation

¹ Steer report 2018 Assessment of the value of air freight services to the UK economy

² Azimuth Report Vol 1 Table 2

³ Azimuth Report Vol 1 Table 1

⁴ East Midlands Airport Sustainable Development Plan 2015 Page 5

⁵ Transforming Stanstead Airport 2018

⁶ Stimulating housing supply - Government initiatives (England) Briefing Paper 13 Dec 2018

⁷ KentOnline 30 July 2014 700 lots auctioned off.

use. Before a licence can be granted the applicant must prove they have access or control of the site which RSP do not have. The applicant must also show they are competent and suitable persons to exercise the privileges of that licence¹.

There are currently planning applications by New Line Networks and Vigilant Global to erect two communication masts at Richborough, south of Manston airport that would significantly infringe the CAA's Obstacle Limitation Surface criteria. These would represent a considerable flight safety hazard. Any mitigation measures taken would either introduce new risks or significantly increase noise over the main built up areas of Margate, Broadstairs, Ramsgate and Herne Bay. The safety risks to operations to the south of the airport would remain and could not be mitigated².

The site at Manston cannot claim to be the only option for the development of a cargo hub. RSP have not shown what other options they have considered. There are various airfields currently up for closure and sale by the Ministry of Defence including Abingdon, Oxfordshire, Alconbury, Cambridgeshire, Arbroath, Angus, Brawdy, Pembrokeshire, Chivenor, Devon, Colerne, Wiltshire, Dishforth, North Yorkshire, Halton, Buckinghamshire, Henlow, Bedfordshire, Mildenhall, Suffolk, Molesworth, Cambridgeshire, North Luffenham, Rutland, Wethersfield, Essex, Woodbridge, Suffolk and Wyton, Cambridgeshire³.

Under the current plans most of the sites will be sold for housing development as part of the Government's wider plan to address the housing shortage in the UK. Mr Schapps a former housing minister has made it clear that he appreciates the need to build more homes. "Where airfields are no longer required, we will work closely with potential buyers and the local council to make sure that the sites' future use best meets the needs of the local economy, including providing thousands of much-needed new housing or their potential for use as civilian airfields."⁴

There are many ex-military airfields up and down the UK that have been redeveloped into shopping complexes, racetracks or housing estates after owners realised there was no longer an aviation need, West Malling now Kings Hill in Kent⁵. Most recently, Alconbury, an ex RAF base, near Cambridge has already seen a change of use and was recently opened by the then Housing Secretary Sajid Javid following redevelopment and

¹ *Civil Aviation Authority Aerodrome Licence Pre-requisites*

² *Dover Council Planning application ref DOV/16/00524 & DOV/16/00044
Osprey Report 2016 Manston Airport Safeguarding Assessment*

³ *The Military Times Airfield sell-offs planned in UK 21 April 2018*

⁴ *The Military Times Airfield sell-offs planned in UK 21 April 2018*

⁵ *Airfields of Britain Conservation Trust*

identified by him as one of the key steps towards delivering the homes the country needs¹.

The entire site of the airport is underlain by an aquifer that provides approximately 70% of Thanet's water. With the risk of fuel contamination or from deicing fluids during airport activity and chemical contamination from the aircraft teardown operation how safe will the water supply be?

Another concern is the effect of fuel pollutants. The environmental impacts of European aviation have increased following the growth in air traffic. Between 1990 and 2005 air traffic and emissions of CO₂ have both increased by about 80%. NOX emissions from aviation have doubled since 1990, and their relative share has quadrupled, as other economic sectors have achieved significant reductions. Future improvements are not expected to be sufficient to prevent an overall growth in emissions during the next 20 years, but may stabilise noise exposure by 2035².

With the call to reduce our carbon footprint and greenhouse gases why would opening a freight hub so near to a built up area be a good thing? It is well known that aviation is one of the fastest-growing sources of greenhouse gas emissions compared to other modes of transport. Greenhouse gas emissions from aviation in the EU have more than doubled since 1990³. As exhaust emissions are airborne the adverse effects are greater and spread over a larger area.

Air freight is the least efficient mode of transport and the most polluting. It may be quicker than other forms of transport but power to weight it loses out to other modes. In any study ships are far more efficient both by cost and by emissions. Air freight is shown to be 10 to 20 times more expensive than shipping⁴. Rail and road are also more cost efficient than air freight and also less polluting.

Containerisation, introduced in the 1960's, revolutionised freight haulage and caused the loss of many jobs and the closure of traditional docks in London, Liverpool and other ports. Deep water berths were created at Tilbury, Felixstowe, Liverpool and Southampton. *"Born of the need to reduce labor, time and handling, containerization links the manufacturer or producer with the ultimate consumer or customer. By eliminating as many as 12 separate handlings, containers minimize cargo loss or damage; speed delivery; reduce overall expenditure".* (Containerisation International, 1970, p. 19)

¹ Homes England launched by Housing Secretary at Alconbury 11 Jan 2018

² European Aviation Environmental Report 2017

³ European Aviation Environmental Report 2017

⁴ Boeing World Air Cargo Forecast 2018-2037

Shipping companies were quick to adapt by building vast container ships, and building bulk carriers for fuel, grain and minerals. Rail and road haulage companies also adapted. Aviation was the one mode of transport that was unable to adapt due to the difficulty of loading a square box into a round fuselage. *The dominant modes supporting intermodalism are trucking, rail, barges and maritime. Air transportation usually only require intermodalism (trucking) for its “first and last miles” and not used in combination with other modes. Additionally, load units used by air transportation are not readily convertible with other modes. The maritime container was too heavy and did not fit the rounded configuration of a plane’s fuselage, and thus a box specific to the needs of the airlines was required. The major breakthrough came with the introduction of wide-bodied aircraft in the late 1970s. Lightweight aluminum boxes, called unit hold devices, could be filled with passenger’s baggage or parcels and freight, and loaded into the holds of the planes using tracking that requires little human assistance¹. (Bellyhold).*

Weight is a major impediment to transport by air. The only freight that benefits from air transportation is restricted to high value, low volume items. Time sensitive items that require speedy delivery like mail or perishable goods. Bellyhold cargo at Heathrow accounted for over 60% of total UK air freight volume in 2017. Stanstead and East Midland airports together accounted for over 20% of all UK freight and the majority of freighter (60%) and integrator (79%) activity. Almost all freight at Gatwick and Manchester airports was carried as bellyhold cargo in 2017².

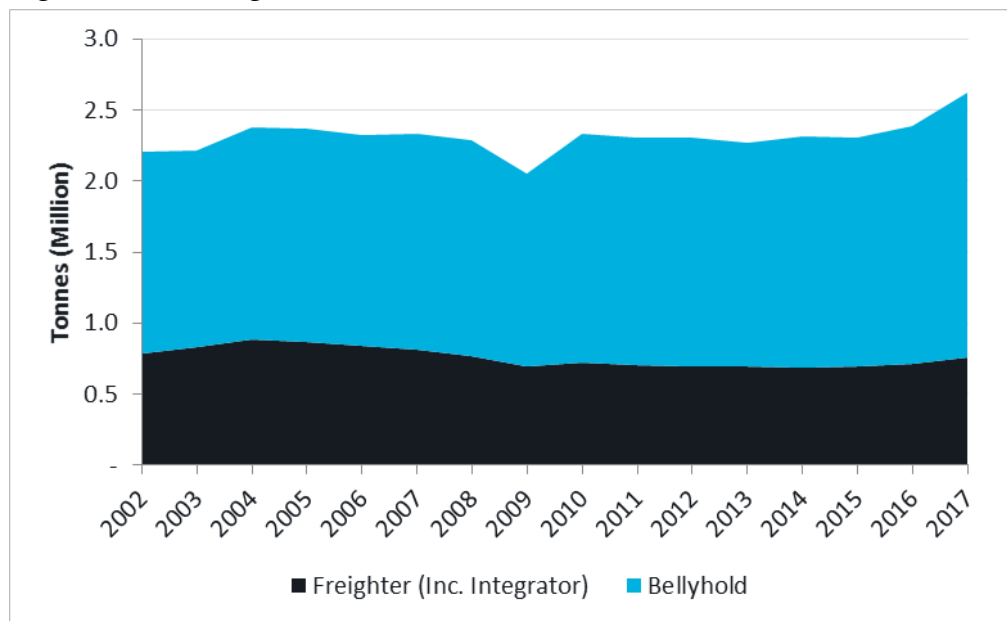
- *Figure 3.2 shows the development of total UK freight volumes in the last 15 years. Aside from the decline in 2009 due to the fallout from the financial crisis, total volumes have remained relatively flat, growing with a compound average growth rate (CAGR) of +1.2% over the 15- year period with volumes only surpassing the pre-crisis peak in 2016.*
- *3.7 The relatively modest CAGR of +1.2% for total volumes is due to a combination of growing bellyhold volumes, which over the 15-year period grew with a CAGR of +1.8%, and stagnating freighter volumes, which declined with a CAGR of -0.2%.*
- *3.8 The share of total volumes carried by freighter aircraft has fallen from over 35% in 2002 to under 30% in 2017 and has fallen away significantly at some airports. The market for dedicated freighter services has struggled globally since the financial crisis due to falling sea-freight rates and the continued rise of air passenger demand (and associated bellyhold capacity), which have*

¹ *The Geography of Transport Systems. Intermodal Transportation and Containerisation by Jean-Paul Rodrigue*

² *Assessment of the value of air freight services to the UK economy. Steer Report Oct 2018*

driven down freighter yields. Although some UK airports have retained important integrator, and to lesser extent, freight operations, freighter activity has remained relatively flat in recent years and is currently lower than pre-crisis levels.¹

- Figure 3.2 UK freight volumes, Million Tonnes (2002-2017)



While RiverOak have chosen air freight as their focus those items will need to be transported to and from the airport, generating many more HGV movements on local roads, resulting in more wear and tear on our road system and an increase in congestion. Richard Burnett of the Road Haulage Association said recently, when talking about Manston airport being used for Operation Stack, that “It is a completely unsuitable location as the road network in that part of Kent is not geared up to accommodating hundreds of HGVs.”² a view echoed by Dr. Beau Webber, the spokesperson for the Save Manston Airport Association on local television.

Manston Airport is one hour drive from the M25 along the A299 Thanet Way which is pockmarked with potholes and frequently suffers from extensive road works due to road subsidence. This is the main approach proposed for the airport. Sally Dixon’s Report on Transportation forecasted 64,906 HGV movements per year by year 20, should this happen the A299 will need considerable improvement³. KCC announce 8 weeks of road closures to allow resurfacing of A299 Thanet Way⁴.

¹ Assessment of the value of air freight services to the UK economy Steer Report Oct 2018

² KentOnline 31 Jan 2018 Keeping Manston on Standby for Operation Stack.

³ Kent County Council continues to work on £7.5 million pothole blitz KCC Media Hub Sept 2017

⁴ Kent County Council Highways Public Notice February 2019

Added to the increased HGV movements required for the transportation of goods it now transpires that aviation fuel will also be brought on site by road adding to more HGV movements and subsequent congestion. Original plans suggested fuel would be transported by rail to a siding at the new, and yet to be built, Parkway Station then piped to the Jentex fuel farm in Cliffsend. The Jentex site already has planning consent for a sheltered housing development. (OL/TH/15/0020) If it transpires the site is used as a fuel holding facility I feel it is far too close to residential dwellings and will cause considerable safety issues¹.

Parkway Station still awaits planning approval and is currently in difficulty due to financing issues².

Economic benefits to the area remain unproven. RSP offer no evidence as to where the 30,000 jobs will materialise from. Neither do they explain which local education institutions they will be working with to train the workers required at the airport. It is not yet clear if a new Traffic Control Tower will be built, as shown on latest plans, or if this will be outsourced to the UK's national air traffic control service, in Swanwick, Hampshire as London City Airport has done.

A proposal put forward by Manston Airport to become a 'reliever' airport for the South East region was dismissed by the Davies Airport Commission Report 2015. Davies report also rejected other options in the south east including Lydd and the Thames Estuary Airport known as Boris Island. The favoured option of Heathrow included a provision of No Night Flights to alleviate local opposition³.

Various reports have been conducted on the viability of Manston Airport but Avia Solutions' view (2016 -2017) is that the previous Azimuth and Northpoint forecasts produced at the request of RiverOak both represent a highly ambitious outlook for air freight volume at Manston Airport and the likelihood of the forecasts being realised is very low and concluded that Manston Airport was not viable⁴.

If RiverOak succeed in convincing the Planning Inspectorate to grant a DCO I fear that the project will go the way of Spain's famed ghost airport at Ciudad Real south of Madrid. *If there is one example anywhere in the world of an airport that should never have been built – a textbook case study that should feature in university transport courses' curricula – it is Ciudad Real Central Airport. Various known*

¹ Azimuth Report Vol 3 Table 8 Fuel Storage Requirements

² Kent Live report 17 Jan 2018

³ Airports Commission Interim Report Dec 2013. Final Report July 2015

⁴ Aviasolutions Final Report Commercial Viability of Manston Airport Sept 2016

also as Don Quijote Airport and South Madrid Airport it was a public-private sector joint venture that was mired in controversy right from the start, later caught up in allegations of fraudulent activity, and ultimately most of the investors lost heavily on it¹. **or Castellon airport** The airport at Castellon was built in 2011 at the tail end of Spain's property boom at a cost of more than £100m, but up until now it has yet to see a single passenger through its gates. Castellon Airport became a symbol of Spain's reckless spending on construction in the 1990s. It features a prominent statue of Carlos Fabra, the local politician who championed its construction and who last December began a four-year jail term for tax fraud². **or the Willy Brandt airport** near Berlin. Dozens of gates are ready for aeroplanes to pull in. Information screens display simulated real-time flight information. Gleaming terminals stand waiting for passengers to walk through them. Berlin's Brandenburg Willy Brandt Airport (BER) looks exactly like every other major modern airport in Europe, except for one big problem: more than seven years after it was originally supposed to open, it still stands empty. There are no passengers using it³.

Should Manston Airport follow in similar speculative fashion following the RSP DCO application we will be back at square one and once again planning to use the site for housing. The original and only sensible argument.

I therefore object to RiverOak proposals.

Submitted by

James Hose
Local resident
Ref MANS-S57179


¹ *The Blue Swan Daily* Published by CAPA - Centre for Aviation 23 Nov 2017

² *The Telegraph Travel News* 17 March 2015

³ *BBC Global News* 6th Nov 2018

References;

UK air freight Study Report 1998



The Air Freight end-to-end Journey
A report by Department of Transport May 2009

Air Freight; The Facts
A report by AirportWatch October 2009

An Airport-by-Airport outline of the Freight picture
at each of the UK's Main Freight Airports
A report by AirportWatch December 2009

Manston Airport under Private Ownership
A report by Kent County Council March 2015

Airports Commission: Final Report
A report by Howard Davies July 2015

Implications for the Air Freight Sector of Different Airport Capacity Options
A report by York Aviation for Freight Transport Association January 2015

Aircraft Noise and Public Health
A report by the Aviation Environment Federation January 2016

Commercial Viability of Manston Airport
A report by Avia Solutions September 2016

European Aviation Environmental Report
EU Publication 2017

A Critique of Dr Dixon's report "Manston Airport: A National and Regional Aviation Asset".
A report by No Night Flights Campaign February 2018

No Room for Late Arrivals
A report by No Night Flights Campaign February 2018

World Air Cargo Forecast
A report by Boeing 2016-2017

Our Cargo Strategy: Heathrow Cargo 2017

Analysis of the Freight Market Potential of a Reopened Manston Airport
A Report by Altitude Aviation 2018

Sky-high Value. The importance of air freight to the UK economy
A report by Freight Transport Association

Summary of submission made by James Hose Ref MANS-S57179
Deadline 3 15 February 2019

Introduction

- Who I am and where I live.

Reasons for objection

- Unrealistic and Detrimental to the wellbeing of residents.
- Speculative and unrealistic flight movements.
- Lack of Public Safety Zone.
- Speculative and unrealistic job projections.
- Mirroring previous failed forecasts.
- Involvement of person with history of failure.
- Previous history of failed airports.
- Two previous attempts at Compulsory Acquisition.
- Applicant not a viable company.
- Change of corporate identity during acquisition processes.
- Lack of financial transparency.
- No experience of airline business or freight handling.
- History of disappointment following similar enterprises.
- Vested interests of our local MP's.
- Project contrary to Government priorities.
- Airport development could and should be a matter for local planning.
- DCO process being manipulated to their own ends.
- Previous ATM capacity being ignored.

- Application aspirational with no grounding in reality.
- Inaccurate geographic measurements.
- Proposals conflict with other approved developments.
- Fails to satisfy location requirements for a freight hub.
- Applicant accepts local area will be blighted by noise.
- Flight paths will overfly heavily populated areas.
- Inadequate noise monitoring.
- Threat of night flights.
- Quota Counts excessive and fail to limit air traffic movements.
- Lack of detail to Noise Insulation Scheme.
- Noise and Light Pollution, and excessive air pollution.
- Fail to quantify where extra cargo flights will come from or if achievable.
- Passenger flights offered without foundation.
- Airline industry in turmoil and project therefore has high risk of failure.
- Airfreight accounts for less than 1% of freight movements worldwide.
- Majority of airfreight is transported in the belly-hold of passenger aircraft.
- Majority of airfreight is centred round Heathrow, Stansted and East Midlands airports with little chance of relocating to Manston.
- Threat of night flights to incentivise carriers to use Manston.
- Decrease in freighter aircraft compared to belly-hold movements.
- No obvious export market to supplement imports.
- Credible alternative development plans offered by site owners.
- Project already discounted by government reviews.

- Airport closed and stripped of equipment.
- Site no longer holds an airport licence.
- New Communication masts nearby represent flight safety hazard.
- Other site options are available.
- Much needed housing is Government priority.
- Brownfield site development better than piecemeal development of Greenfield sites.
- Airport development threatens water contamination of aquifer.
- Threat of fuel pollutants and Greenhouse gas emissions.
- Air Freight more expensive than other modes of transport.
- Airfreight unable to take advantage of containerisation.
- Airfreight limited to a niche market.
- Project will generate an unacceptable increase in road movements.
- Site position detrimental to swift transport of goods.
- Fuel storage and transportation requirements highlight safety issues.
- Lack of rail access and poor road access.
- Economic benefits unproven.
- Education benefits unproven.
- Viability of airport proposals highly unlikely.
- Real prospect of failure.
- Cycle of failure being repeated.



Manston Airport Safeguarding Assessment

Review of Wind Business Support Report

Date: 2nd September 2016

Revision: Issue 1

Osprey Ref: 70992 002

This document is of UK origin and has been prepared by Osprey Consulting Services Limited (Osprey) and, subject to any existing rights of third parties, Osprey is the owner of the copyright therein. The document is furnished in confidence under existing laws, regulations and agreements covering the release of data. This document contains proprietary information of Osprey and the contents or any part thereof shall not be copied or disclosed to any third party without Osprey's prior written consent.

© Osprey Consulting Services Limited 2016
1, The Bullpens, Manor Court, Herriard, Basingstoke, RG25 2PH
01420 520200 / enquiries@ospreycl.co.uk
Registered in England and Wales under No: 6034579



Document Details

Reference	Description
Document Title	Manston Airport Safeguarding Assessment Review of Wind Business Support Report
Document Ref	70992 002
Issue	Issue 1
Date	2 nd September 2016
Client Name	RiverOak Investment Corp
Classification	Commercial in Confidence

Issue	Amendment	Date
Issue 1		2 nd September 2016

Approval Level	Authority	
Author	Osprey CSL	Senior Consultant
Reviewer	Osprey CSL	Team Leader
Approver	Osprey CSL	Director
Client	RiverOak Investment Corp	

Table of Contents

1	Introduction	1
1.1	Overview.....	1
1.2	Findings of the Osprey AIA [Reference 1].....	1
1.3	Osprey Company Background and Expertise.....	3
1.4	Document Structure.....	3
2	Review of the Analysis Contained in the WBS Report	4
2.1	Review of Section 1 of the WBS Report (Introduction).....	4
2.2	Review of Section 2 of the WBS Report (Impacts on Use as a Licensed Aerodrome)....	6
2.3	Review of Section 3 of the WBS Report (Impacts on Use by Light Aircraft (General Aviation)	9
2.4	Review of Appendix B of the WBS Report (Examples of Aerodromes with Managed Obstacles).....	13
2.5	Infrastructure and Airspace Issues not included within the WBS Report.....	16
3	Conclusions	18
3.1	Overview.....	18
3.2	Conclusions of the Review of the WBS Report.....	18
4	References	21
A1	Osprey Brief Résumés	23
A1.1	Overview	23

Table of Figures

Figure 1	Dover Transmitter Mast (for illustrative purposes), the aircraft is flying 700 ft above the mast.....	12
----------	---	----

Table of Tables

Table 1	Analysis of Obstructions included in the WBS Report.....	14
Table 2	Table of References	22

1 Introduction

1.1 Overview

RiverOak Investment Corp (RiverOak) is committed to the reopening of Manston Airport (formerly Kent International Airport) and is in early discussions with the Planning Inspectorate concerning the submission of an application for a Development Consent Order (DCO) for what would be a Nationally Significant Infrastructure Project (NSIP). This report should be read in conjunction with the earlier Osprey Consulting Services Ltd (Osprey) Aviation Impact Assessment (AIA) – *Effect of Proposed Communication Masts on Operations conducted at a reopened Manston Airport 70990 001 Version 2*, dated April 2016 [Reference 1].

RiverOak commissioned the AIA [Reference 1] which sought to determine if two proposed communication masts (the Vigilant Global UK Ltd (Vigilant Global) Communications Mast and the separate proposal for construction of the New Line Networks (NLN) Mast at Kings End Farm) would influence safe operations at Manston Airport were it be reopened and licensed in accordance with Civil Aviation Authority (CAA) and European Aviation Safety Agency (EASA) Regulations.

The Vigilant Global mast proposal is for a single steel lattice mast 322 metres (m) in height (324 m Above Ordnance Datum (AOD)) together with nine anchor points, installation of telecommunications and associated equipment, site compound, secure fencing, single storey equipment structure, and associated works at the former Richborough Power Station, Ramsgate Road, Sandwich, CT13 9NL. The Dover District Council (DDC) planning application reference number is 16/00044.

This document was authored and internally reviewed by personnel with substantial operational aviation knowledge. It reviews the assessment conducted by Wind Business Support (WBS), which has been submitted in support of the planning application, on behalf of Vigilant Global [Reference 2], of the potential impacts of the proposed single steel lattice mast on Manston Airport should the aerodrome return to operational use.

Osprey's assessment of the Vigilant Global mast project has been impartial, offering our professional opinion and expertise on the perceived impact of the development on Manston Airport; the WBS Report has not changed our opinions contained in Reference 1 of the operational impact the mast will create to a reactivated Manston Airport. However, for completeness, we will explain where our views differ from those of WBS and why. We will also introduce assessment and opinion by suitable third party subject matter experts that support our view. Details of the author, reviewer and approver of this document can be found at Annex A1.

1.2 Findings of the Osprey AIA [Reference 1]

1.2.1 Obstacle Limitation Surfaces

As part of this assessment, the previously protected Obstacle Limitation Surfaces (OLS) for the airport were established and assessed in relation to the Vigilant Global

mast. It was found that the proposed Vigilant Global mast would penetrate the Manston Airport Inner Horizontal Surface (IHS) by 224 m, a significant breach. Osprey assessed that if Manston Airport were operational, safety concerns associated with such a severe breach so close to the airport, would cause the airport operator to object to the development on the grounds of CAA Airport Safeguarding Regulations.

1.2.2 Aircraft Arrival and Departure Procedures/Radar Vectoring Area

The AIA also identified that construction of the Vigilant Global mast would require the minimum vectoring altitude of the Radar Vectoring Area (RVA) in the region of the mast to be increased from 1,500 to 2,100 feet (ft). This may influence the design of any new Instrument Flight Procedures (IFPs) for the airport and may affect any decision on suitable aircraft holding heights. The Vigilant Global mast would also need to be taken into account by radar controllers at Manston when vectoring aircraft near the airport to ensure prescribed separation is maintained between the mast and an aircraft. Osprey assessed that, though not in itself grounds for objection to the proposal, there would be an impact of the Vigilant Global mast development on Manston Airport Instrument Flight Rules¹ (IFR) operations, which would need to be mitigated and managed.

1.2.3 Visual Circuit Operations

The AIA also found that aircraft operating in the Manston visual circuit to the south of the airport would be confronted by the Vigilant Global mast as they turn downwind within the circuit; aircraft are legally obliged to avoid such obstructions by at least 500 feet (ft) either laterally or vertically. The construction of the Vigilant Global mast would create an obstacle, which can be difficult to acquire visually from the air especially in marginal weather conditions. A cumulative effect would be created with the construction of the NLN mast, an effect that would be difficult to mitigate.

To address the hazard created by the construction of the mast, the AIA considered whether the circuit height could be increased or the track of the visual circuit extended to the south; however, both these measures introduce new safety hazards to Visual Flight Rules² (VFR) operations at Manston Airport. The use of a northerly circuit would reduce the impact created by the Vigilant Global mast; however, this would concentrate VFR traffic to the north producing a potential choke point over a populated area, moving the noise footprint and other environmental effects over an area used for tourism and recreation. Finally, the AIA found that the presence of such large obstructions so close to the airport would constitute an enduring hazard to VFR operations to the south. Raising the visual circuit height would reduce poor weather options to the VFR pilot near the airport.

If Manston Airport were operational, the residual safety impact on VFR operations, despite implementation of mitigation measures, would result in what is considered a sustainable objection by the airport operator.

1.2.4 Aerodrome Traffic Zone (ATZ)

¹ IFR: Regulations and rules established to govern flight when due to weather or other conditions flying the aircraft by using outside visual references is not safe. IFR flight depends on flying the aircraft by reference to instruments on the flight deck and external electronic signals.

² VFR: A set of regulations under which a pilot operates an aircraft in weather conditions generally clear enough to allow the pilot to see where the aircraft is going.

The purpose of an ATZ at Manston would be to provide protection to aircraft departing, arriving or flying near the airport by ensuring that any aircraft in the immediate vicinity of the airport is required to contact ATC.

In theory, the proposed masts would have little impact on Manston Airport's application for an ATZ. However, in practice the Vigilant Global masts operational impact on IFR procedures and significant operational and safety impact on VFR procedures, completely undermines the case for establishment of an ATZ.

1.2.5 Radar Operations

Radar operations were previously conducted from Manston utilising an onsite ATC radar system. After the airport's closure, the radar system was decommissioned and removed. It is envisaged that, should Manston reopen, a replacement radar system will be installed to provide radar surveillance to enhance flight safety in the unregulated airspace surrounding the airport. Radar systems have the potential to create interference to digital radio-relay systems in some situations and vice-versa.

Manston Airport will have a responsibility to ensure a safe operating environment is maintained; this includes the electro-magnetic spectrum. The nature of emissions from the Vigilant Global mast and its alignment are not yet known; the potential technical impact cannot therefore currently be assessed. Any potential effects of radar interference created by the Vigilant Global mast if it is constructed would have to be considered during the procurement of any new radar system and may influence the nature and cost of the solution.

1.3 Osprey Company Background and Expertise

Osprey is an independent privately owned aviation focused consultancy. The company was founded to offer a genuinely independent approach to engineering, operations and management support to the aviation market.

We have supported over 40 individual Air Traffic Management (ATM) programmes in the past 8 years ranging from complete replacement of airport ATM equipment through to complex Airspace Change Programmes. Our staffs are all aviation specialists having worked within the aviation industry for many years (as Air Traffic Controllers, Engineers and Aircrew). They are professional and dedicated to delivering a very high quality service to our clients.

We believe our success is down to our unique ability to offer a team with current flying, controlling and engineering expertise. These skills are applicable to military and civil scenarios, air traffic control and management alike and have been brought to bear in this report.

1.4 Document Structure

The following structure is followed through the document:

- Section 1 (this section) introduces the report;
- Section 2 reviews the analysis contained within the WBS Report: *Richborough Communications Mast: Manston Airport Impact Assessment*;
- Section 3 provides the conclusions to this report; and
- Section 4 provides a list of references used throughout the document.

2 Review of the Analysis Contained in the WBS Report

The following section provides a review of each Section of the WBS Report, completed on behalf of the applicant, Vigilant Global UK Limited.

2.1 Review of Section 1 of the WBS Report (Introduction)

2.1.1 Assessment Criteria

Within the Management Summary of the WBS Report it states that:

'the aerodrome is located approximately 3.5 kilometre (km) north of the proposed mast'.

However, within Section 1 this distance is later referred to as:

'the aerodrome is located approximately 4 kilometres (km) north of the proposed communications mast'.

No point of reference measurement at Manston Airport is stipulated (e.g. Aerodrome Reference Point, Runway Mid-point, Runway Threshold). When assessing obstructions such discrepancies (in distance and reference point) are significant and call into question the accuracy of subsequent assessments and conclusions.

WBS correctly state that Manston Airport is currently closed and

'there is therefore no active aerodrome operator that can be contacted directly to discuss proposals with regards to any future use of Manston Airport'.

However, Osprey has assessed the proposed development against the appropriate CAA and planning regulations. Equally, a number of objections to the mast have been lodged with the Dover District Council including a private pilot, a regular user of the airport when it was active and a Director of the Aircraft Owners and Pilots Association (AOPA).

Osprey contend that, by applying extant regulations and taking into account the views of suitable experts, expressed in the consultation process, it is therefore possible to consider the potential impact of the proposed Vigilant Global mast were the airport to be operational. The Osprey AIA concluded that safety concerns associated with such a development so close to the airport would result in a sustainable objection by an incumbent airport operator.

2.1.2 Aerodrome Licensing

CAA CAP 168 *Licensing of Aerodromes* [Reference 3] is published in support of the discretionary powers relating to the granting of an aerodrome licence contained in CAP 393 *Air Navigation: The Order and the Regulations (ANO)* [Reference 4]. CAP 168 states that:

'Prior to the grant of a licence and for continuing licensing, the CAA inspectors will visit the aerodrome and determine the extent to which the aerodrome, its facilities and its operational procedures meet the licensing requirements. In making its assessment of an application for or continuation of a licence the CAA will adopt as flexible an approach as is consistent with the achievement and maintenance of a satisfactory level of safety.'

The proposal to develop the Vigilant Global mast to the south of Manston Airport would significantly infringe the CAA OLS criteria, which are specifically established to ensure safe operations in the vicinity of an airport. The severity of this infringement, which cannot be fully mitigated, could undermine Manston Airport's case for a CAA Licence and EASA approval. This, in turn, would have significant commercial implications as operators may not wish (or be able) to operate from an unlicensed or non-EASA compliant airport.

WBS consider that the

'future re-opening of Manston Airport is speculative'.

However, RiverOak is fully committed and has demonstrated its desire to revive Manston Airport as a successful hub for international airfreight that also offers passenger flights, executive travel and aircraft engineering services. RiverOak has demonstrated this commitment across two years of campaigning to purchase and reopen the airport and their commitment has never wavered. RiverOak believes that Manston's accessibility, long runway and community support represent the strongest option available to Government to increase runway capacity in the South East for airfreight. The airport will serve airfreight operators, ease surface congestion, improve resilience and boost economic growth in Kent. Support to aviation use at Manston Airport continues to be a key planning policy objective of Thanet County Council's Local Plan. In light of this evidence, it is difficult to support the assessment that the future reopening of Manston is *'speculative'*. To that end Osprey consider that its potential reopening and the impact on the Airport's ability to gain an EASA licence must be considered as part of any evaluation of the Vigilant Global mast proposals; this evaluation has been omitted from the WBS Report.

2.1.3 Consultation feedback

WBS state that:

'As part of the planning process for the proposed mast, aviation stakeholders have been consulted directly. NATS En-route plc, the UK air navigation provider, and the Civil Aviation Authority (CAA), have raised no objections to the scheme following the submission of the planning application, and stated that the proposed lighting arrangement is deemed acceptable'.

NATS En-route are responsible for the management of the nationwide en-route air traffic network; invariably this is above 10,000 ft or within controlled airspace in the vicinity of major airports. Their response therefore reflects that there is no network impact associated with the proposals; it does not consider any impact at airport level unless NATS have responsibility for that airport. Indeed, its reply to consultation highlighted that in its response:

'...does not provide any indication of the position of any other party, whether they be an airport, airspace user or otherwise'.

While RiverOak have had informal discussions with the CAA and are developing proposals for the regaining of the aerodrome licence and introduction of flight procedures, no formal submissions have yet been made to the CAA. Therefore, the CAA response is predicated on the information it held at the time. Neither the NATS nor CAA response should be interpreted to imply that there would be no impact on Manston Airport should it re-open.

2.2 Review of Section 2 of the WBS Report (Impacts on Use as a Licensed Aerodrome)

2.2.1 An existing mast

WBS provides information of the past and present obstacle baseline environment within Section 2 of their report. They correctly identify a much smaller, existing mast, located to the north of the site planned for the Vigilant Global mast. However, crucially, unlike the Vigilant Global mast proposal, this mast does not penetrate the Manston OLS (specifically the IHS).

CAP 168 states that:

“New objects, or additions to existing objects, should not extend above an inner horizontal surface, a conical surface or an outer horizontal surface, except, when in the opinion of the CAA, the object would be shielded by an existing immovable object, or it is determined that the object would not adversely affect the safety or significantly affect the regularity of aircraft operations.”

The concept of shielding only applies where there is a substantial and permanent object, or natural terrain feature, that already penetrates the OLS. The CAA may accept (at their discretion) objects of lesser or equal height around this shielding object penetrating the surface; however, due to the severity of the penetration by the Vigilant Global mast there is no apparent shielding, near Manston, to minimise any effect to the Airport’s OLS. The smaller existing mast referred to in the WBS Report therefore has no relevance.

2.2.2 A previous obstruction

WBS highlight that when Manston was last operational there was a single chimney located at the Richborough Power Station, which penetrated the Manston IHS by 33 m. In controlled blasts, the three cooling towers and the single chimney of the Richborough Power Station were demolished in March 2012. However, if approved, the Vigilant Global mast would significantly penetrate the Manston IHS by 224 m (much greater than was created by the now demolished Richborough Power Station chimney).

With regard to the restriction and the removal of obstacles, CAP 168 provides the following guidance:

“Existing objects above an approach surface, transitional surface, take-off climb surface, inner horizontal surface or conical surface should as far as practicable be removed, except when in the opinion of the CAA the object is shielded by an existing immovable object”

Osprey does not have historical evidence as to how construction of the Richborough Power Station cooling towers were approved but it is likely that this was under

different safeguarding criteria and when Manston was a Royal Air Force (RAF) Station; it is equally unclear what the RAFs approach to safeguarding would have been at the time.

The CAA regulations are clear; where a pre-existing obstruction exists it should, as far as practicable, be removed. With regard to the previous cooling tower obstruction, this has now been done. The presence of a previous, much smaller obstruction, when the airfield was MOD operated cannot be considered a relevant precedent. Indeed, to do so runs directly contrary to CAA regulation.

2.2.3 Instrument Flight Procedures

The CAA is the regulator with respect to Instrument Flight Procedures (IFPs), setting the associated policy and issuing approvals to individuals and organisations for designing IFPs. The CAA audits procedure designers and design organisations to ensure that they maintain the highest standards to promote safe and flyable procedures. The CAA has approved six design organisations or individual designers.

The author of the WBS Report assesses the potential impact the Vigilant Global mast would have on the previously published Manston IFPs. However, the WBS Report does not state if the Author holds the necessary CAA accreditation to make such an assessment. The earlier Osprey report, *Manston Airport Safeguarding Assessment* [Reference 1] included a review by a CAA approved and accredited procedure designer. The review considered the previously published flight procedures for the airport and the influence the construction of the Vigilant Global mast may have on them. Given the desire to reopen for commercial flight and freight operations, a consideration of future likely procedures was also taken. The reviewer is a current commercial pilot, CAA Approved Procedure Designer (CAA APD), and flying examiner and instructor. His conclusions stated that the proposed mast would affect the operations of Manston Airport if it were to reopen for commercial aircraft. Although some impacts may be militated against, the mast would influence instrument departure procedures, aircraft holding patterns and visual manoeuvring of aircraft following an instrument approach. Furthermore, it is likely that there would be greater overflight and environmental impact to the main built up areas of Margate, Broadstairs, Ramsgate, and Herne Bay.

2.2.4 Visual Manoeuvring (Circling) Area

WBS state that:

‘The VM(C) area is one in which obstacle clearance should be taken into consideration for aircraft carrying out a circling approach’.

It also states that:

“It is likely that the proposed mast is too high to allow circling at a sufficiently low altitude in the area of the mast for some aircraft”

Osprey agrees with the above statements. However, their implications are that, with the exception of small light aircraft, all the visual manoeuvring procedures would need to be restricted to flying on the north side of the airport. This would have an environmental impact on the more densely populated areas on the Kent north coast.

Any new design of procedures for a reactivated airport is likely to include the use of a Visual Manoeuvring (Circling) Area. For environmental reasons and noise

abatement, it can be seen that the area most likely to be used to conduct a circling manoeuvre will be to the south of the airport to avoid the populated areas of Broadstairs, Margate and Ramsgate, north of the extended runway centrelines at the aerodrome. Any increase in the Obstacle Circling Height (OCH) for the procedure is likely to restrict its use in marginal weather conditions, as aircraft may not be able to maintain Visual Meteorological Conditions³ (VMC).

WBS also state that:

“There are no obstruction reasons why aircraft using an instrument approach to either end of the Manston runway (denoted runway 28 or runway 10) would need to conduct visual manoeuvring (circling)”.

The UK Integrated Aeronautical Information Publication (UK IAIP) [Reference 5] describes the procedure as one that is completed after an aircraft has completed an instrument approach⁴. Subject to prevailing weather conditions which allow the flight to continue in VMC, the pilot may position the aircraft visually to circle to land on another runway (at dual runway aerodromes) or the opposite end to the runway (at single runway aerodromes); the manoeuvre is not restricted to aerodromes with more than one runway surface (as indicated in the WBS Report).

Osprey accept that the incidence of a circling approach being performed is likely to be low; however, when stating that there are no obstruction reasons for an aircraft flying a circling approach the WBS assessment has failed to take into account the following:

- Pilot training/continuation training - aircrew practice the manoeuvre even when weather conditions or operations do not demand it. Previous operations at Manston included the operation of light aircraft and a flight training company that had been based at the aerodrome for 30 years before its closure and an enforced move to Lydd Airport. British Airways had selected Manston Airport as a base to conduct flying training on its Airbus A380 and Boeing B787 aircraft from July 2013, the first of the flights took place with the A380. Demonstrating the ability to fly such procedures is an essential element of pilot training and examination.

Commercial cargo operators will require a degree of certainty in operating from Manston airport; some cargos can be time critical. It could therefore be anticipated that, in the event of the Instrument Landing System (ILS) on the in-use runway being unavailable (due to maintenance or unserviceability), aircraft may more frequently use the ILS on the out-of-use runway until the required visual references are achieved to circle and land on the in-use runway.

Although it is accepted that these are potential requirements, they are relevant and realistic. It is therefore difficult to support the WBS assessment that there is no requirement for a circling approach.

³ VMC. Flight in which visual flight rules (VFR) flight is permitted, conditions in which pilots have sufficient visibility to fly the aircraft maintaining visual separation from terrain, obstructions and other aircraft.

⁴ An instrument approach to a runway can be completed in any weather conditions (although in good weather the approach may be completed for training purposes).

2.3 Review of Section 3 of the WBS Report (Impacts on Use by Light Aircraft (General Aviation))

2.3.1 VFR Regulations

The Standardised European Rules of the Air (SERA) took effect across Europe in December 2014 [Reference 6]. The rule (known as the '500 ft Rule') is included within the Official Journal of the European Union Regulation (EU) No 923/2012 and states that:

... "except when necessary for take-off and landing, or except by permission of the competent authority, a VFR flight shall not be flown at a height less than 500 ft above the ground or water, or 500 ft above the highest obstacle within a radius of 500 ft from the aircraft".

2.3.2 Impact of the mast on visual circuit operations

The Osprey AIA identified aircraft turning downwind in the visual circuit would turn directly towards the mast at the same altitude, leading to a requirement to avoid the mast by a minimum of 500 ft. Section 3 of the WBS Report provides background information on the use of visual circuits by General Aviation (GA) aircraft and provides details of the previously published visual circuits in use at Manston Airport; track, direction of turn and altitudes/heights at which aircraft were to fly. All jet and aircraft exceeding 5,700 kg Maximum Total Weight Authorised (MTWA) would fly a circuit height of 1,700 ft (QNH⁵)/1,500 ft ((QFE⁶). All other aircraft that are not subject to noise abatement procedures (such as GA aircraft) flew the circuit at 1,200 ft QNH/1,000 ft QFE.

The WBS Report accepts that:

"The circuit height in the above is 1000 ft above ground level (1000 ft QFE), which is typical for light aircraft. This is below the level of the top of the mast. For this reason, with the proposed mast present, future circuits would have to avoid the immediate area of the proposed mast. It would be impractical to have a circuit at an elevation sufficiently above the proposed mast. This does not prevent circuits to the south".

"The previously published circuits for Manston provide circuits both to the north and the south of the airport at 3 nautical miles (nm) (5.6 km) from the runway to the north and an unspecified distance to the south".

Traditionally aircraft circuits at Manston were flown to the south of the aerodrome over uninhabited marshland and land used for industrial means to the south of Minster and Monkton. Pilots would fly the circuit to remain visual with the airfield; the small number of complaints from residents provides evidence that any nuisance to local residents was negligible.

2.3.3 Changing circuit height

⁵ QNH Barometric Pressure adjusted to sea level, aircraft altimeter will read the altitude of an aircraft above mean sea level.

⁶ QFE Local Barometric Pressure, which refers to the altimeter setting that, will cause the altimeter to read the height above a specific aerodrome or ground level, and therefore read zero on landing.

For aircraft flying a southerly visual circuit, the WBS Report acknowledges the detrimental impact to flight safety that would be created by the Vigilant Global mast. Furthermore, WBS accept that any increase in circuit height would not provide suitable mitigation as

“an increase in circuit height would also require an increase in cloud base height to allow visual flight”.

There are other reasons why changing circuit height is undesirable which are covered in the Osprey AIA.

2.3.4 Changing circuit position

The use of the northerly circuit would reduce the impact created by the masts; however, the exclusive use of the northerly circuit will concentrate the noise footprint and other environmental effects creating a potential VFR choke point to the north of the Airport over a populated area used for tourism and recreation. Equally, the residual risk to the south of the airport would remain.

2.3.5 Changing circuit route to the south of the mast

WBS provides examples of alternate circuits, which it states:

“provide horizontal separation from the proposed mast”.

WBS also informs the reader of the responsibilities of aircrews visually to avoid the mast and accepts that the mast will:

“need to be avoided but this can be readily and safely be achieved”.

However Osprey assess that changes to the lateral extent of the visual circuit to address the safety issues associated with the mast would introduce other safety issues as a result. These include:

- Aircraft that encounter a problem whilst flying downwind in the circuit (GA aircraft are invariably single engine), will not be able to turn into the airfield until they are certain of remaining clear of the mast.
- Compromise in the maintenance of visual contact with the airfield as pilots concentrate on avoiding the mast.
- Longer periods of flight over the sea for single engine aircraft when they are low and slow; thereby significantly increasing the risk of ditching in the event of an engine failure at this critical stage of flight.
- Maintenance of visual separation from the mast would cause further hazards in the event of an aircraft emergency or poor visibility situations. The avoidance of the mast, together with the added distraction of handling an aircraft emergency, could potentially lead to pilot error and a subsequent unsafe situation.

Moving the circuit further away from the airfield would also increase environmental effects such as increased fuel burn, and expansion of the noise footprint to a wider area, away from the immediate area of the aerodrome.

2.3.6 Changing the southern circuit route to the north of the mast

To route north of the mast (but south of the airfield) would see aircraft complete a continuous and steep turn onto final approach for landing thus increasing the risk of

unstable approaches (where a pilot misjudges height, speed or alignment with the runway). This is a non-standard approach, which would be unfamiliar to visiting pilots, and introduces significant risk to both aircraft and third parties on the ground.

2.3.7 The residual risk

In all circumstances flying a southerly circuit, including the “*alternate circuits*” suggested in the WBS Report; the construction of the Vigilant Global mast would create an obstacle which can be difficult to visually acquire from the air especially in marginal weather conditions, for any skill level of pilot, and particularly whilst the aircraft is configured for the impending approach to the runway. Add additional factors such as a visiting pilot, the distraction of integrating into a busy circuit pattern or an aircraft emergency, and it is difficult to comprehend the WBS assessment that it is acceptable to expect pilots to maintain 500 ft visual separation from an obstruction at the same height.

2.3.8 Third party expert opinion

Ospreys assessment is based on its thorough understanding of the regulations along with experience as Air Traffic Controllers and both commercial and private pilots. However, to reinforce the practical implications of the Vigilant Global mast proposals we felt it would be helpful to obtain the views of a third party GA pilot who has vast experience of operating from Manston.

Osprey therefore obtained the following independent analysis from a private pilot licence holder who holds display pilot authorisation who has extensive experience of operating from Manston. Their expert opinion is included in full below:

Plans to erect a Mast(s) in the vicinity of the visual Circuit at Manston Airport

I learnt to fly at Manston in 1986 and continued to operate from there until its closure in 2014. In my opinion, the erection of trading masts within the vicinity of the visual circuit would present an unacceptable risk to aircraft landing, departing and training at Manston.

- 1. When joining or operating in a visual circuit it is important to identify the position of other aircraft doing the same. Having to identify and avoid a structure of the size planned is likely to distract a pilot from their lookout for other aircraft.*
- 2. Whilst a standard orbit is in the circuit direction, in reality aircraft are instructed by ATC to orbit out of the circuit in order to maintain separation for IFR traffic. This would require aircraft leaving the circuit in order to maintain the 500 ft rule.*
- 3. In certain conditions, it is very difficult to identify masts. The position of the sun, the weather conditions, seasonal changes in the surrounding countryside and the change from sea/land can make identification very difficult (see attached photos).*
- 4. Moving the circuit outside the mast(s) means that the circuit will not be a standard circuit, this raises a number of issues for visiting traffic. It also means that the base leg for Runway 10 and crosswind leg for 28 takes aircraft out over the sea for a longer period. This is an unacceptable risk, especially for rare vintage aircraft.*
- 5. Manston has always been a diversion airfield for aircraft in trouble crossing the Channel. (There were at least two civilian and one military diversion during the*

consultation period for the orderly closure of the airfield). In poor weather the airfield is easy to locate by following the coastline, however, a mast close to the visual circuit in conditions of poor visibility would be a hazard to such aircraft.

Should an aircraft fly into the mast not only are lives likely to be lost, but the trading the masts are to be erected to support would also suffer. The risk is not acceptable.

The photograph mentioned within point 3 above is provided below and amplifies the challenge to pilot's in acquiring visually, obstructions of the nature of the Vigilant Global mast.



Figure 1 Dover Transmitter Mast (for illustrative purposes), the aircraft is flying 700 ft above the mast

The Vigilant Global mast would be 25% bigger than the mast in the figure. Within the illustration, no guy-lines can be seen, nor any aviation lighting despite the photographs being taken in good weather conditions. Few aircraft will have the luxury of looking out for the Vigilant Global mast above the horizon and for most the rural background (as shown in Figure1) and the potential shimmer from the sea will make it extremely difficult to acquire. For aircraft descending into the visual circuit

area, visual acquisition of the mast will be particularly difficult against an agricultural background.

2.4 Review of Appendix B of the WBS Report (Examples of Aerodromes with Managed Obstacles)

2.4.1 Licensed Aerodromes

The safeguarding of the obstacle environment around an airport ensures the safety of aircraft, and therefore by default the local communities surrounding the airport. For large commercial aircraft, the implications to both aircraft and third parties on the ground need to be fully considered. As part of the Osprey AIA completed on the Vigilant Global mast [Reference 1], the OLS for Manston Airport were established and assessed in relation to the proposed Vigilant Global mast. CAP 168 [Reference 3] sets out the standards required at UK licensed aerodromes relating to management systems, operational procedures and physical characteristics for the assessment and treatment of obstacles, further information is included within sub-paragraph 2.1 of this review document.

2.4.2 Unlicensed Aerodromes

It is a legal requirement for an aerodrome to be licensed if it is used for:

- commercial passenger flights;
- public transport passenger flights;
- flying training in aircraft above a specified weight.

Due to the commercial and international nature of its operation, Manston would be a licensed aerodrome that is compliant with European (EASA) regulations; this, in turn, places considerable responsibility on the airport to manage and assure a safe operating environment.

There are examples of TV masts close to unlicensed small airfields in the UK, for instance, at Membury airfield, which is included within the WBS Report. These unlicensed airfields do not need to meet the safety standards of a licensed aerodrome and are generally used for recreational flying in light aircraft, microlight aircraft, and gliders.

Flying at these types of unlicensed aerodromes assumes that the pilot accepts a higher level of risk, and that the risk is mainly on the pilot, because the risk to third parties on the ground is very small for these types of small aircraft. However, for larger commercial aircraft, the risk to third parties on the ground is different and the duty to protect paying passengers is at a far higher standard. For these reasons, the safeguarding of obstacles near an airport, such as Manston, must be performed to a higher standard. Counter arguments based on examples of small unlicensed aerodromes, such as those included in the WBS Report, are therefore not relevant and have been excluded from this analysis.

2.4.3 WBS examples of aerodrome obstructions

Appendix B of the WBS Report provides examples of obstructions close to licensed and unlicensed aerodromes. As stated above, comparison to unlicensed aerodromes is irrelevant, as they are not obliged to apply safeguarding criteria; they have therefore been excluded from this review. However, for the four licensed

aerodromes there was no analysis in the WBS Report to establish whether the example obstructions quoted would penetrate the OLS for the specified aerodrome, nor does it analyse the operations and the potential influence to established flight paths of aircraft at the aerodromes. Osprey has completed the analysis omitted from the WBS Report. Table 1 below provides the results of this analysis.

Licensed Aerodrome	Obstruction	Location in relation to the OLS	Breach of OLS	Extent of Breach (ft)	Range from OLS Datum (Airfield Reference Point (ARP) or Runway Threshold)
Prestwick	Mast	Conical Surface	No	Nil	4.88 km (Runway Threshold)
Bristol	Mast	Conical Surface	Yes	36 ft	4.62 km (Runway Threshold)
Old Buckenham	Mast	Beyond the OLS range	N/A	N/A	6.3 km (ARP)
Cardiff Airport	Mast	Outer Horizontal	Yes	582	8.18 km (ARP)
	Chimney 1 (350 ft)	Inner Horizontal	No	Nil	2.72 km (Runway Threshold)
	Chimney 2 (510 ft)	Inner Horizontal	Yes	158	3.72 km Runway Threshold)

Table 1 Analysis of Obstructions included in the WBS Report

Prestwick Airport

The listing for Prestwick Airport within Table 1 above lies underneath and below the airport's OLS. The mast stands on elevated land and rises to approximately 201 ft above ground level. The UK IAIP states that all airline crew-training circuits shall be flown at a height of at least 1,500 above aerodrome level (aal). In other respects and for noise abatement purposes aircraft should climb to height 1,500 ft before turning into the circuit. The height flown for training circuits provides sufficient vertical clearance from the mast for safe flight operations.

Bristol Airport

The Bristol mast breaches the conical surface established for the airport by 36 ft. When compared to the breach of the Vigilant Global mast of over 737 ft, the breach at Bristol is relatively insignificant. Visual circuits are normally flown to the south of Bristol Airport, which immediately takes the aircraft's track away from the mast location. It is unknown if the mast impacts any other operation conducted at the airport to the extent of potential the Vigilant Global mast will have to operations

conducted at a reopened Manston Airport. However, in summary, the breach is far less than seen at Manston, is further away from the airfield and does not affect the visual circuit.

Old Buckenham Aerodrome

Old Buckenham Aerodromes OLS is not infringed. It is not therefore a relevant comparator.

Cardiff Airport

Though the mast quoted represents a significant vertical breach, at over 8 km from the airport the effect on Cardiff airport would be far less. As with Manston, it is likely that impact on IFR procedures could be managed, as the mast is clear of the runway centreline. Due to its distance from the airport, it would not represent a hazard to visual circuit traffic. However, it is worthy to note that Cardiff VFR Guide to visiting pilots states:

“After junction 36 route direct to just north of St Hilary television mast. If it is hazy you might not see the mast until you are close so be aware that it is 1161 feet QNH”.

Confirming the Osprey assertion that such structures are difficult to acquire visually.

Chimney 2 (Table 1) is within the lateral confines of the St Athan Local Flying Zone (LFZ). During the hours of operation of the LFZ (maximum altitude 1,700 ft amsl), aircraft are to be in communication and comply with instructions from St Athan ATC. Outside of the hours of operation of St Athan ATC, gliding may take place within the area subject to approval from Cardiff ATC. When the LFZ is activated aircraft operations from Cardiff Runway 12/30 (the closest runway to the chimney) are restricted (visual approaches from the south to Runway 12 are unlikely to be authorised and departures from Runway 30 are required to climb straight ahead to avoid the area). This indicates that the area of airspace is of less significance to operations conducted at Cardiff Airport and an area where obstructions may not have a significant impact to normal operations. Furthermore, visual circuits conducted at Cardiff are normally flown to the north of the aerodrome (away from the chimneys location).

2.4.4 Mitigation of obstacles

CAP 168 defines an airports OLS and their characteristics and describes the action to be taken in respect of objects which infringe them. In ideal circumstances, all the surfaces will be free from obstacles but when a surface is infringed, any safety measures required by the CAA will have regard to:

- The nature of the obstacle and its location relative to the surface origin, to the extended centreline of the runway or normal approach and departure paths and to existing obstructions;
- The amount to which the surface is infringed;
- The gradient presented by the obstacle to the surface origin;
- The type of air traffic at the aerodrome; and
- The instrument approach procedures published for the aerodrome.

Safety measures could be as follows:

- Promulgation in the UK IAIP of appropriate information;

- Marking and/or lighting of the obstacle;
- Variation of the runway distances declared as available;
- Limitation of the use of the runway to visual approaches only; and
- Restrictions on the type of traffic.

Note: not all of the above may be appropriate for a given aerodrome. The degree of freedom from obstacles must be determined by survey in accordance with CAP 232 *Aerodrome Survey Information* [Reference 7].

The effects of obstacles on aviation interests have been widely publicised; the primary concern is one of safety with operational effectiveness and efficiency as additional considerations. Such obstructions can have a physical and/or technical impact on an airport. For example, buildings and the erection of new structures can present a physical obstruction at or close to an aerodrome which despite their size, can be difficult to see from the air in certain weather conditions. Equally, airport runways, procedures and Communication, Navigation and Surveillance (CNS) systems also require protection.

WBS state:

“the successful management of obstacles including masts is illustrated by a number of existing examples of both licensed and unlicensed aerodromes”.

The successful management of obstacles is dependent on the scale of any impact and any measures that can be successfully employed to mitigate the obstacle. Successful mitigation is dependent on the size of the airport, the nature of the control service it provides, the type of procedures used at the airport, the range of the obstruction from aerodrome/aircraft flight procedures and the type of aircraft that utilise the flight procedures.

As the aerodromes listed above within Table 1 successfully manage the obstacles included in the WBS Report, it is considered that the effect to operations at the individual aerodromes is negligible.

Our analysis of the obstacle examples given in the WBS Report suggests that their infringement of OLS is far less severe than would be for the Vigilant Global mast and their physical location is easier to manage, particularly as visual circuits turn away from the obstruction or are sufficiently distant. The Vigilant Global mast would be located 3.57 km from the Manston Airport ARP and would breach the IHS for Manston by a significant amount (over 737 ft) in what would be the airport’s operationally critical airspace.

2.5 Infrastructure and Airspace Issues not included within the WBS Report

As Manston no longer has an aerodrome licence, the development of operational processes and procedures required to ensure the safe and efficient operation of the airport is crucial. Not included within the WBS analysis is the potential impact the construction of the mast may create to the following airport airspace and infrastructure:

- An ATZ was previously established at Manston Airport. The purpose of an ATZ at Manston would be to provide protection to aircraft departing, arriving or flying near the airport by ensuring that any aircraft in the immediate vicinity of the airport are required to contact Air Traffic Control. In theory,

the proposed Vigilant Global mast would have little impact on Manston Airport's application for an ATZ. However, in practice the operational impact on IFR procedures and significant operational and safety impact on VFR procedures, completely undermines the case for establishment of an ATZ.

- Radar operations were previously conducted from Manston utilising an onsite ATC radar system. After the airport's closure, the radar system was decommissioned and removed. It is envisaged that, should Manston reopen, a replacement radar system will be installed to provide radar surveillance to enhance flight safety in the unregulated airspace surrounding the airport. Radar systems have the potential to create interference to digital radio-relay systems in some situations and vice-versa.
- Manston Airport will have a responsibility to ensure a safe operating environment is maintained; this includes the electro-magnetic spectrum. The nature of emissions from the Vigilant Global mast and its alignment are not yet known; the potential technical impact cannot therefore currently be assessed. Any potential effects of radar interference created by the Vigilant Global mast if it was constructed would have to be considered during the procurement of any new radar system and may influence the nature and cost of the solution. CAP 738 *Safeguarding of Aerodromes* [Reference 8] provides information and guidance on the safeguarding of aerodromes. The purpose of CAP 738 is to offer guidance to those responsible for the safe operation of an aerodrome or a technical site, to help them assess what impact a proposed development or construction might have on that operation. It provides the following information with regard to technical site safeguarding:

“Physical characteristics, such as the size, shape and construction materials, of a proposed development may affect the performance of aeronautical systems at or near an aerodrome. In addition, the siting of telecommunication or other radiating equipment can cause adverse electromagnetic interference to those systems. It may be appropriate (For the aviation stakeholder concerned) to approach other aviation organisations, especially where the Air Traffic Services (ATS) are provided by a third party organisation, on the aerodrome to ensure the proposal does not impact on their electronic systems. It is the responsibility of aerodromes with their ATS providers for the technical safeguarding of all of their radio sites for which they hold approvals under the Air Navigation Order [Reference 4]. Where necessary, procedures should be established to meet this requirement. Details of interference safeguarding criteria are outlined in CAP 670, Air Traffic Services Safety Requirements” [Reference 9].

3 Conclusions

3.1 Overview

The WBS Report does not change any of the conclusions made in the Osprey AIA.

This section summarises our review of the WBS Report and includes additional factors not fully explored by WBS.

3.2 Conclusions of the Review of the WBS Report

3.2.1 Impact on the Manston Airport OLS

The Vigilant Global mast would significantly infringe the CAA OLS criteria, which are specifically established to ensure safe operations near an airport. The severity of this infringement, which cannot be fully mitigated, could undermine Manston Airport's case for an EASA Licence. This, in turn, would have significant commercial implications as operators may not wish (or be able) to operate from an unlicensed or non-EASA compliant airport.

The WBS Report does not appear to fully explore the possibility of Manston Airport reopening nor fully analyse all the issues to conclusion. There are inconsistencies in how the mast locations are reported which call into question subsequent analysis. Equally, some of the examples given by way of precedent are irrelevant or not directly comparable. A current mast in the vicinity of Richborough does not penetrate the OLS and the use of the cooling towers (now demolished) as a precedent are contrary to CAA (CAP 168) guidance. Equally, the case studies quoted include unlicensed aerodromes (which are not subject to safeguarding regulation). For those licensed aerodromes quoted, the WBS Report does not explore the nature and degree of any obstacle impact; some obstacles do not penetrate the airports OLS and others, due to the nature or location of the obstruction, have little or no impact on airport operations. None of the given examples in the WBS Report compare either directly or indirectly to the severity of impact of the Vigilant Global mast on the Manston Airport OLS.

3.2.2 Impact on Manston Airport Operations

The conclusions of the review by a CAA approved procedure designer stated that, while the impact could be managed, the proposed mast would affect IFR operations at Manston Airport if it were to reopen. This would result in the altitude of the RVA in the region of the mast being raised from 1,500 to 2,100 ft; the circling procedure would also have to route to the north increasing the noise footprint to more populated areas.

However, the impact on VFR operations would be far great and appears to have been underestimated by WBS. As it is accepted by WBS that increasing the circuit height is unacceptable, the WBS Report therefore focused on the proposal for aircraft to route north or south of the mast (at the same height). Both proposals introduce new and significant flight safety hazards. Equally, the hazard of a pilot acquiring and maintaining visual contact with the mast, whilst integrating with other traffic, cannot

be underestimated. Add the factors of poor weather, aircraft emergency or visiting aircraft unfamiliar with Manston, and the risk would be intolerable, both to aircraft and, likely, to the CAA when considering Manston's application for an operating licence.

This is not solely the opinion of Osprey; to add further weight to this assessment we have canvassed the subject matter expertise of a highly experienced pilot that has operated from Manston for a prolonged period. The description of the difficulties confronted by a pilot, in visually acquiring a slender construction such as a communications mast, portrays a compelling and highly credible description of the flight safety risks the Vigilant Global mast would represent to VFR operations near the airport.

3.2.3 Consultation Response

The WBS Report states that neither NATS nor the CAA have raised an objection to the proposal. As our report has shown, this could give the reader a false impression. The NATS response relates to its responsibility for the UK ATC network or those airports for which it is responsible; none is affected by this proposal. The CAA response reflects the fact that, at present, only informal discussions have taken place with regard to the reopening of Manston; its response is therefore inevitably based on the current situation but RiverOak are already preparing proposals to regain the aerodrome Licence and establish the necessary flight procedures.

A number of objections to the mast have been lodged with the Dover District Council including a private pilot, a regular user of the airport when it was active and a Director of the Aircraft Owners and Pilots Association (AOPA); all reflect the Osprey opinion.

3.2.4 Infrastructure and Airspace Issues not included within the WBS Report

Not included within the WBS analysis is the potential impact the construction of the mast may create to the following airport airspace and infrastructure:

An ATZ was previously established at Manston Airport. The purpose of an ATZ at Manston would be to provide protection to aircraft departing, arriving or flying near the airport by ensuring that any aircraft in the immediate vicinity of the airport are required to contact Air Traffic Control. In theory, the proposed mast would have little impact on Manston Airport's application for an ATZ. However, in practice the Vigilant Global mast operational impact on IFR procedures and significant operational and safety impact on VFR procedures completely undermines the case for establishment of an ATZ.

Radar operations were previously conducted from Manston utilising an onsite ATC radar system. After the airport's closure, the radar system was decommissioned and removed. It is envisaged that, should Manston reopen, a replacement radar system will be installed to provide radar surveillance to enhance flight safety in the unregulated airspace surrounding the airport. Radar systems have the potential to create interference to digital radio-relay systems in some situations and vice-versa.

Manston Airport will have a responsibility to ensure a safe operating environment is maintained; this includes the electro-magnetic spectrum. The nature of emissions from the Vigilant Global mast and its alignment are not yet known; the potential technical impact cannot therefore currently be assessed. Any potential effects of

radar interference created by the communication masts if they are constructed would have to be considered during the procurement of any new radar system and may influence the nature and cost of the solution.

4 References

Reference	Name	Origin
1	Effect of Proposed Communication Masts on Operations conducted at a reopened Manston Airport 70990 001 Version 2 April 2016	Osprey
2	Richborough Communications Mast Manston Airport Impact Assessment April 2016	WBS
3	CAP 168 Licensing of Aerodromes Edition 10 February 2014	CAA
4	CAP 393 Air Navigation Order: The Order and the Regulations Version 4.1 April 2015	CAA
5	UK Integrated Aeronautical Information Package AIRAC 08/2016	NATS AIS
6	www.caa.co.uk/sera Accessed July 2016	CAA
7	CAP 232 Aerodrome Survey Information Edition 3 February 2008	CAA
8	CAP 738 Safeguarding of Aerodromes Version 2 December 2006	CAA
9	CAP 670 ATS Safety Requirements	CAA

Reference	Name	Origin
	Version3 May 2014	

Table 2 Table of References

A1 Osprey Brief Résumés

A1.1 Overview

Background information on the Osprey personnel who have compiled and completed peer review of the assessment is provided below.

Author

The Author is a Senior Consultant of Osprey CSL and has over four years' experience in performing impartial, independent assessments of the potential impact of both onshore and offshore wind farms for wind energy developers, airports and local planning authorities; currently examining, planning and validating airspace mitigation measures in support of the UKs renewable policy. Previously he completed 34 years of exemplary service and extensive expertise in all disciplines in Air Traffic Control and Airspace Management in the Royal Air Force in the role as Air Traffic Controller. The author is a highly capable aviation professional who possesses a wealth of operational and managerial experience and is a Subject Matter Expert on Aviation Safety Assessments and analysis of developments to affect air traffic management and airfield safeguarding criteria including OLS.

Reviewer

The Reviewer joined Osprey in July 2012 after a period of seven years at the CAA. During this time, he was lead point of contact for airspace planning and regulation of offshore operations, including navigation and communications infrastructure to support safe and efficient air traffic operations. Prior to the position at CAA the reviewer had 28 years RAF aircrew experience; 25 of those in fast jet operations worldwide.

Approver

The Approver has recently joined Osprey after 27 years as an air traffic controller in the Royal Air Force. In his most recent appointment, he was seconded to the CAA, initially as Assistant Director of Airspace Policy 2 at the Directorate of Airspace Policy. On the formation of the Safety and Airspace Regulation Group, he became Deputy Head of the Intelligence Strategy and Policy Division where he was responsible for all CAA Safety Policy development and oversight of its major programmes including Spaceplanes, Unmanned Air Systems and State Safety. An excellent problem solver and negotiator, he was also heavily involved in managing the diverse requirements of civil and military stakeholders during the London 2012 Olympics and holds qualifications in strategic management, strategic direction, leadership and project management.