RiverOak Strategic Partners

Annex 3: Applicant's Submission for the re-determination of the Manston Application

TR020002/RED/A3
Redetermination Document

Project Name:	Manston Airport Development Consent Order
Application Ref:	TR020002
Date:	9 July 2021

MANSTON AIRPORT PROJECT

PINS REFERENCE TR020002

APPLICANT'S SUBMISSION FOR THE REDETERMINATION OF THE APPLICATION

DOCUMENT TR020002/RED/A3

Annex 3: Changes in Quantitative Need

1. This Annex sets out how the quantitative need for the Development has been affected by changes since 9 July 2019, and describes the changes and the impacts on the level of need from those changes. It deals with each of the issues affecting quantitative need set out in the Secretary of State's letter in turn, namely changes in demand for air freight, changes in capacity at other airports, locational requirements for air freight, and the effects of Brexit and/or Covid. It then deals with three additional issues: growth in world freighter fleets, increasing competitiveness in the air freight market and global trade wars. First, however, there are brief submissions on the Examining Authority's conclusions.

Evidence during the examination

2. The Examining Authority concluded at paragraph 5.7.23 of their report that they preferred the evidence of York Aviation from the withdrawn representations made by Stone Hill Park Ltd over the case of the Applicant, and that need would be met at Heathrow, Stansted, East Midlands Airport and others. This paper sets out how since July 2019 the Applicant's case has been vindicated by events, and has been further strengthened by a pandemic that could not have been predicted in July 2019.

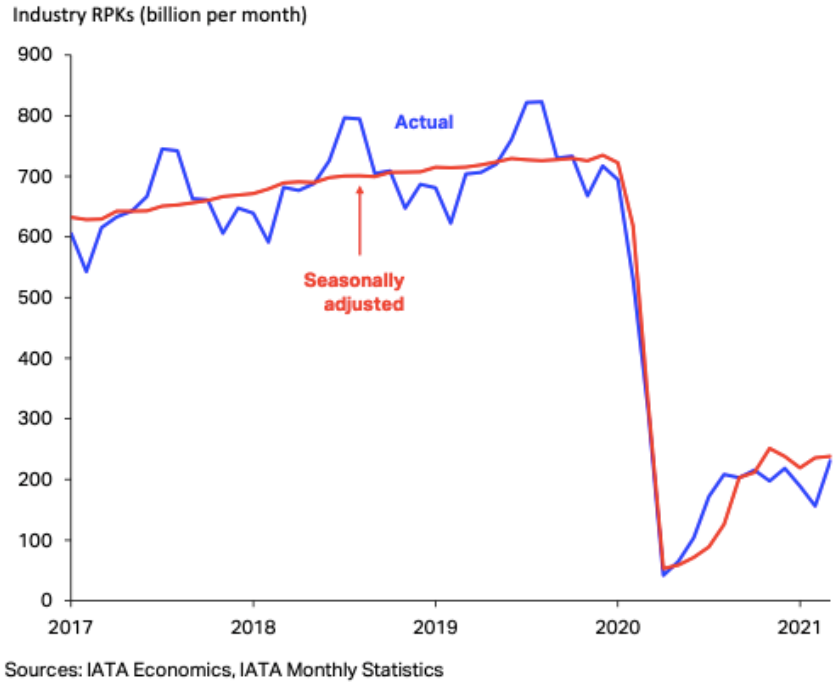
3. When considering the weight to give to the evidence of York Aviation when engaged by Stone Hill Park, the Applicant suggests that the Secretary of State prefers its Note on Freight Connectivity, prepared for Transport for London in 2013 (when Manston Airport was still open) and exhibited in Stone Hill Park's own Written Representation starting on page 272. When considering various runway expansion scenarios by 2050, this concludes at paragraph 25 that:

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

Changes in demand for air freight

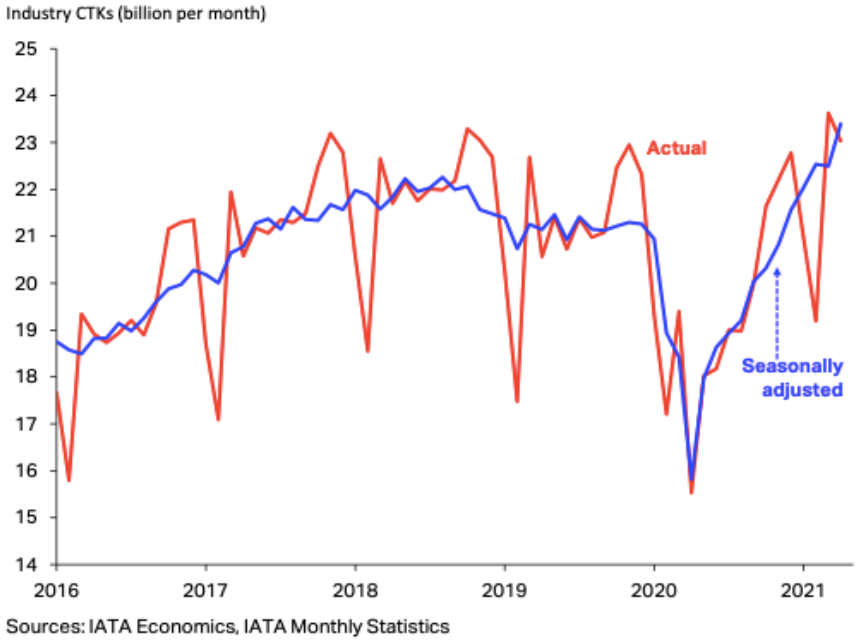
4. There have been considerable changes in demand for air freight since 2019. Whilst air transport is one of the industries hardest hit by the global pandemic, cargo has been a lifeline for airports, shippers and consignees. In terms of ongoing demand, analysis by the International Air Transport Association (IATA) concludes that macroeconomic drivers remain supportive of the need for air cargo. Unlike passenger markets (shown in Figure 1), air freight has made a V-shaped recovery, as shown in Figure 2.

Figure 1 Air passenger volumes



See https://www.iata.org/en/iata-repository/publications/economic-reports/air-freight-monthly-analysis---april-2021/

Figure 2 Cargo Tonne Kilometre levels, actual and seasonally adjusted

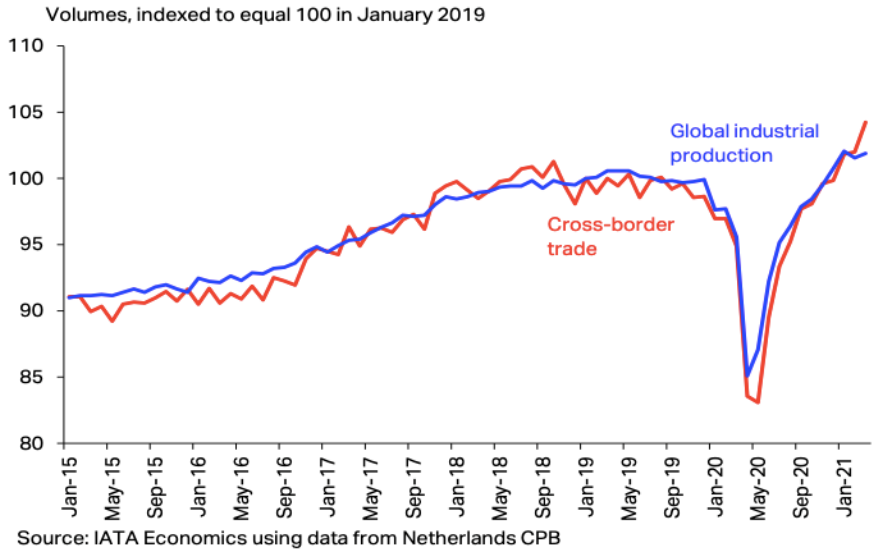


See https://www.iata.org/en/iata-repository/publications/economic-reports/air-freight-monthly-analysis---april-2021/

5. There are number of factors influencing ongoing market growth for air cargo including a positive economic rebound generating the need to move goods quickly to restock inventory to meet demand, mitigating supply chain disruptions, intensified growth in e-commerce, and changes

to distribution models, particularly related to e-commerce integrators. These factors are highlighted by the global industrial production and goods trade figures provided by IATA and shown in Figure 3.

Figure 3 Global industrial production and goods trade



See https://www.iata.org/en/iata-repository/publications/economic-reports/air-freight-monthly-analysis---april-2021/

6. The WTO expects global goods trade volumes to grow by 8.0% in 2021. Together, the inventory restocking cycle, backlog of orders, increased attractiveness of air cargo and improving air cargo capacity, ensure air cargo will remain strong in 2021 and IATA anticipates air cargo revenues to reach a record-high $152bn in 2021, up by around 19% compared to 2020[1].

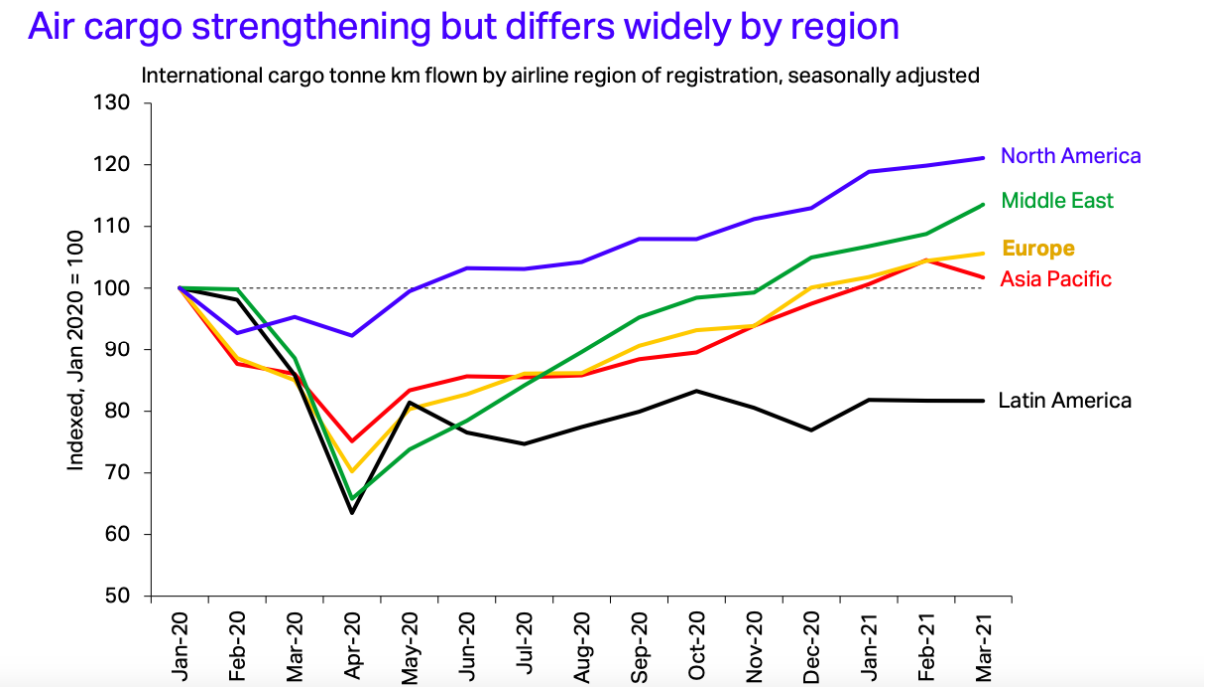
7. Figure 4 shows the strengthening of the air cargo industry by region. All regions, except Latin America, have been growing sharply since the start of the pandemic, rising to above January 2020 levels within a year.

8. Additionally, and for the UK specifically, the need to trade outside the EU with countries such as Australia (with whom a free trade deal was agreed in June 2021) will drive increased need for air freight transportation. The previous reliance on trucking UK air freight to and from European airports for flying is even more precarious than it was in 2019 when described during the examination, given the UK's exit from the EU and consequent additional controls and bureaucracy, and the heavy demand for critical supplies. Future changes to the demand for air freight include the following.

9. Supply chain disruptions: IATA report that pandemic-related supply chain disruptions and resulting delivery delays continue to benefit air transportation. In February 2021, average supplier delivery times lengthened to the second greatest in manufacturing PMI (Purchasing Managers' Index) survey history. As a result, companies may prefer aircraft transportation to help recover end-to-end delivery times.

[1] https://www.iata.org/en/iata-repository/publications/economic-reports/operating-environment-remains-favourable-for-air-cargo/

Figure 4 International cargo tonne km flown by airline region of registration, seasonally adjusted



See https://www.iata.org/en/iata-repository/publications/economic-reports/air-cargo-strengthening-but-differs-widely-by-region/

10. Supply chain resilience: The Suez Canal blockage in March 2021 further exacerbated supply chain bottlenecks and many businesses have moved to air from ocean transportation to move goods because of extreme shipping delays from port congestion and overwhelmed vessel operators[2]. Going forward, companies need to prepare for future supply chain disruptions, due to a range of reasons including the potential for extreme weather, financial crises, terrorism, cyberattacks and pandemics[3].

11. E-commerce: The global pandemic has rapidly accelerated the uptake of technologies such as video conferencing, online banking and online shopping, perhaps by many years or even a decade[4]. The reasons for the increase in online shopping are clear: When traditional retail channels were forced to close or customers were less comfortable shopping in store, consumers turned to online purchasing[5].

12. The UK is one of the top three online shopping nations. E-commerce retail sales here reached almost a third of all retail in May 2020[6], a dramatic increase as shown in Figure 5. Since online shopping has become a daily norm for millions of UK consumers, it is likely that levels will remain high, far exceeding pre-pandemic estimates[7]. At the end of April 2021, the Loadstar

[2] https://www.freightwaves.com/news/air-cargo-2021-the-good-the-bad-and-the-ugly

[3] https://www.fm-magazine.com/news/2021/jan/coronavirus-supply-chain-disruptions-kelloggs-nike-hp.html

[4] https://www.economist.com/the-world-ahead/2020/11/16/new-technological-behaviours-will-outlast-the-pandemic

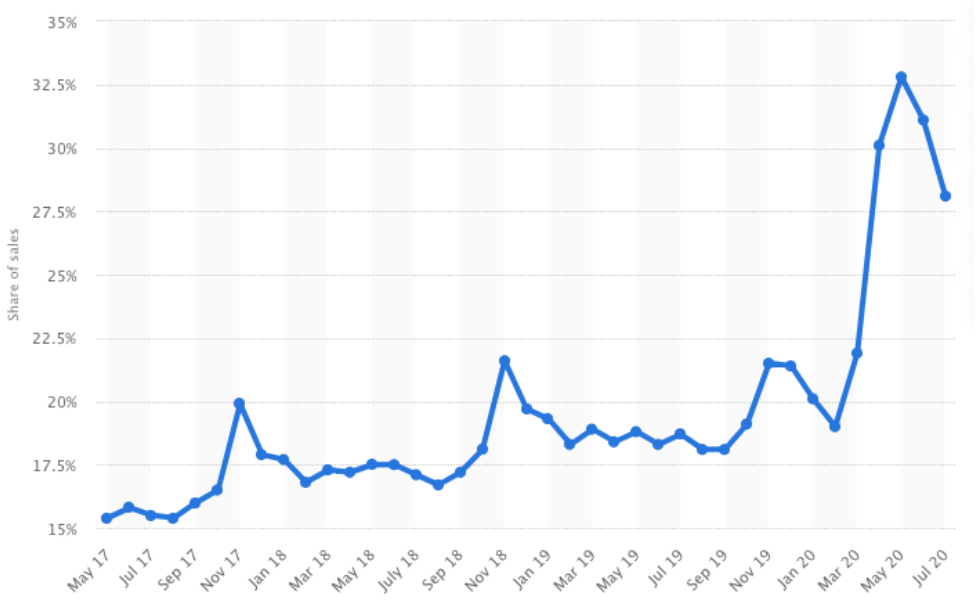
[5] Ti Insight, How Covid-19 changed the global e-commerce logistics market: 4 accelerated trends, February 2021 https://www.ti-insight.com/whitepapers/how-covid-19-changed-the-global-e-commerce-logistics-market-4-accelerated-trends/

[6] https://www.smartinsights.com/digital-marketing-strategy/online-retail-sales-growth/

[7] https://www.emarketer.com/content/how-will-pandemic-affect-us-ecommerce-sales-2021

reported that e-commerce volumes from China to the UK, where shipments now have to be separated from EU goods, are requiring, "multiple charters, on fixed schedule flights from China's inland cities to Heathrow"[8].

Figure 5 Share of online sales in the UK



Source: https://www.smartinsights.com/digital-marketing-strategy/online-retail-sales-growth/

13. Changes to distribution channels: The change in purchasing channels has helped create a shift in transportation modes to favour air cargo[9]. In the past, bricks-and-mortar retailers often ordered a small number of ocean containers of merchandise per year from a factory. Now, new distribution channels created by e-commerce players such as Amazon allow smaller and more frequent shipments from factories via fulfilment centres to consumers. This provides more rapid responses to consumer preferences and to fluctuating demand.

14. Around the world, demand for foreign goods and cross border trading is surging. Online cross-border sales grew 21% during the first half of 2020[10], with the online cross-border market in Europe worth €146 billion in 2020, an increase of 35% compared to 2019[11]. The cross-border share represents 25.5% of total online sales in Europe. Operating across multiple countries and continents is likely to require a change in the way goods are transported and even a relatively small shift from sea shipping, currently handling around 94% of trade by weight, to air, would mean considerable growth in air cargo and its associated infrastructure. This means that a 1% shift to air cargo equates to 16% growth in air transportation of goods[12].

[8] https://theloadstar.com/air-freight-market-going-nuts-with-volumes-and-rates-climbing/

[9] https://aviationweek.com/aerospace/aircraft-propulsion/opinion-why-air-cargo-growth-could-accelerate-after-pandemic

[10] Poole, B (2021), *How COVID-19 Changed the Global E-commerce Logistics Market: 4 accelerated trends*, Transport Intelligence

[11] https://ecommercenews.eu/25-5-of-ecommerce-in-europe-is-cross-border/

[12] https://aviationweek.com/aerospace/aircraft-propulsion/opinion-why-air-cargo-growth-could-accelerate-after-pandemic

15. Current shortages in maritime capacity and increasing border controls at seaports are already creating moves towards air freight. This is particularly pertinent given the issues in the Suez Canal in March 2021, estimated to have held up $9.6bn of trade along the waterway each day, equating to $400m and 3.3 million tonnes of cargo an hour, $6.7m a minute[13]. Continued issues with sea freight from China have resulted in shortages of capacity and equipment, along with high spot rates and this may potentially continue.

16. One of the key issues with distribution is the 'last mile' element of the journey. The Department for Transport (DfT) has expressed concerns over the number of delivery vans on the road due to the increase in e-commerce. With around 25% of all NOx road transport emissions due to light commercial vehicles[14], any taxation targeted in this area could hasten the implementation of the use of cargo drones and autonomous electric vehicles. This may further add to the viability of air freight as a mode of transportation, particularly if airports are geared up to smooth the transition between aircraft and both air and surface drones.

17. E-commerce players: Amazon Air, previously known as Amazon Prime Air, is Amazon's cargo airline used exclusively to transport their packages. In 2016, Amazon began scheduled operations with 20 B-767 aircraft, operating in the US only. As of 2021, Amazon Air operates around 81 aircraft (registered and leased) and is considering plans to grow the fleet to 200 by 2028. The daily number of Amazon Air flights globally grew from 85 in May 2020 to 140 by February 2021.

18. Research[15] from the Chaddick Institute for Metropolitan Development at DePaul University highlights the recent growth of Amazon Air. Recent activity indicates that Amazon has:

    - Launched an intra-Europe network using Amazon-registered aircraft
    - Expanded flights by 15% since August 2020 and positioned itself to grow again in the near future
    - Instigated plans to fly numerous Amazon-owed aircraft, primarily 767s, rather than lease from third parties
    - Invested heavily in Cincinnati and Wilmington (Ohio) Airports, providing options to handle third-party shipping
    - Boosted its presence at major passenger-oriented airports in the US's largest cities

19. Amazon Air's intra-Europe network, shown in Figure 6, provides the potential for growth throughout Europe. The network is served by two B-737s leased to ASL Ireland Airlines, with a third aircraft likely to enter service soon. The Irish carrier, who also provides services for DHL and FedEx, generally operates eight daily flights on medium-distance routes. The schedule, as shown in Figure 6 is:

    Aircraft 1: Morning Cologne, DE to Milan, IT roundtrip followed by a Cologne – Madrid, ES roundtrip.

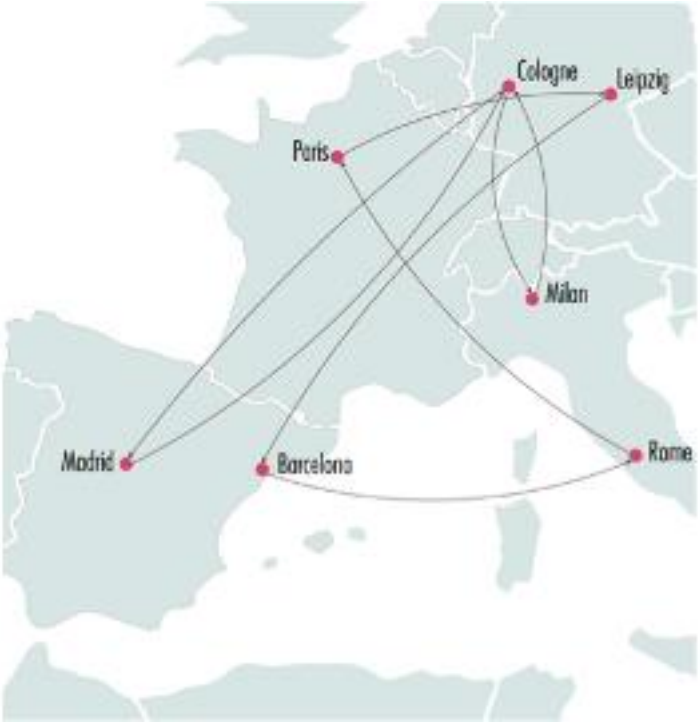
    Aircraft 2: Leipzig, DE – Barcelona, ES – Rome, IT – Paris, FR –Leipzig

[13] https://www.bbc.co.uk/news/business-56559073

[14] Poole, B (2021), *How COVID-19 Changed the Global E-commerce Logistics Market: 4 accelerated trends*, Transport Intelligence

[15] Schwieterman, J. et al (2021), Primed and Positioned: Strategic moves by Amazon Air, Chaddick Policy Brief, 16 February 2021

Figure 6 **Amazon Air's intra-Europe network**



Source: Schwieterman, J. et al (2021), Primed and Positioned: Strategic moves by Amazon Air, Chaddick Policy Brief, 16 February 2021, page 2

20. Off season transatlantic international flying has been largely reduced to a semi-regular roundtrip between Amsterdam and Chicago. As with the US network, it is decentralized with widely geographically dispersed airports. In Europe, airports are currently at least 300 miles (483 kilometres) apart whereas in the US airports can be closer. The network is at present "skeletal" and does not yet include the Benelux countries, the UK, and the Republic of Ireland. Amazon Air may increase the density of its network going forward, particularly including those areas such as the UK, which are currently missing. It is interesting to note that around 70% of Amazon's departures are between 06.00 and 22.00, a less nocturnal operation than FedEx Express or UPS.

21. Cainiao, Alibaba's logistics arm, is also growing in strength. In March 2021, Cainiao teamed with Saudia Cargo to provide five-weekly flights using B777s from Hong Kong to Liege, Belgium, linking Asia, Europe and the Middle East to meet growing e-commerce demand[16]. Linking merchants and customers in China, Saudi Arabia and Europe is expected to create a seamless logistics network and increase synergies between regions.

22. Changes in aircraft fleet: In the short term, before passenger demand recovers, there will be continued reliance on dedicated freighters. As such, the role of all-cargo is particularly vital on long haul flights, since whilst the recovery in passenger demand is likely to take three to five years, long haul, on which most cargo is carried, will be the slowest to recover.

23. The capacity for belly hold cargo is also being reduced by the trend towards phasing out four-engine widebody aircraft in favour of smaller, more fuel-efficient two-engine aircraft, with narrow

[16] https://www.aircargonews.net/business/supply-chains/cainiao-and-saudia-cargo-team-up-on-china-europe-flights/

bodies, is accelerating[17]. For example, Airbus has 7,400 firm orders from 121 customers for the A320neo series aircraft (end of May 2021 figures)[18]. Boeing is also refocusing its new aircraft development strategy towards narrow body aircraft to compete with the Airbus A321XLR, with a large single-aisle design similar in size and dimensions to the B-757[19]. The withdrawal of Boeing-747 and Airbus 380 wide-body passenger fleets with their significant belly hold cargo capacity in favour of smaller narrow-body aircraft (such as the A321XLR) on long haul routes means significantly less belly hold cargo capacity will be available.

24. The impact of the switch, from wide-body to narrow-body aircraft, on the available belly hold capacity is considerable. As an indication of the scale of the reduction in capacity, a comparison between the A321XLR and the B747-400 has been made and is detailed below. The B747-400 wide-body has around 150m^3 compared to around 50m^3 on the narrow-body A321XLR, one third of the belly volume. Once space for passenger bags on a narrow-body aircraft is taken into account, little space is available for cargo. Figure 7 shows the typical bag-to-passenger ratio on international, domestic and transfer flights by region.

Figure 7 **IATA ADRM Version 9/10/11 Passenger Bag to Pax Ratios**

Exhibit 3.4.19.3.3: Typical Bag-to-Passenger Ratios for High-Level Purposes

Type of Passenger Traffic	Europe	Asia/Africa	USA	Rest of World
International	1.0–1.5 Bags/Pax	2.0 Bags/Pax	2.0 Bags/Pax	1.5 Bags/Pax
Domestic	0.5–1.0 Bags/Pax	1.0–2.0 Bags/Pax	1.0 Bags/Pax	1.0 Bags/Pax
Transfer	1.0–1.5 Bags/Pax	1.0–2.0 Bags/Pax	1.0–2.0 Bags/Pax	1.0–1.5 Bags/Pax

Source: IATA

25. The narrow-body A321XLR has, as shown by Figures 8 and 9:

    a. Typical seating capacity: 220 seats
    b. Typical LD3 ULD max cargo load: 1500kg/ULD (variations)
    c. Typical IATA standard gauge yields bags/ULD (LD3): 40 bags/ULD
    d. Assumed bag to passenger ratio (IATA European Sector) ADRM Version 11: 1.5 bags max

[17] https://www.traveldailymedia.com/airlines-long-and-thin-routes/

[18] https://www.al.com/business/2021/06/united-orders-70-airbus-jets-with-many-to-be-made-in-mobile.html

[19] https://aviationweek.com/mro/aircraft-propulsion/boeing-refocuses-single-aisle-counter-airbus-a321xlr

Figure 8 **A321XLR passenger configuration**

Source: https://www.airbus.com/aircraft/passenger-aircraft/a320-family/a321neo.html

Figure 9 **A321XLR Cargo Baggage Belly Hold Load Options (Pallets/ULDs)**

Dimensions

Overall length	44.51 m
Cabin length	34.44 m
Fuselage width	3.95 m
Max cabin width	3.70 m
Wing span (geometric)	35.80 m
Height	11.76 m
Track	7.59 m
Wheelbase	16.90 m

Capacity

Pax	Max seating	244*
	Typical seating 2-class	180-220
Cargo	LD3 capacity underfloor	10 LD3-45W
	Max pallet number underfloor	10
	Water volume	59 m^3

Source: https://www.airbus.com/aircraft/passenger-aircraft/a320-family/a321neo.html

26. An A321XLR with 220 passengers, each with 1.5 bags equates to an estimated total of 330 bags onboard. With an average of 40 bags per Unit Load Device (ULD[20]), 8.25 ULDs would be required to carry all passenger baggage. With a capacity of 10 ULDs, only a maximum of two would be available for cargo. Assuming 1,500 kgs of cargo per ULD, the resulting free space on a A321XLR for belly cargo is around 3,000 kgs or three tonnes.

27. Using the same method to compare the available belly hold capacity on a B747-400ER, as shown in Figure 10, derives the following:

    a. 461 passengers each with 1.5 bags = 692 bags
    b. 692 bags with 40 per ULD = 17.3 ULDs
    c. ULD capacity on the aircraft = 26
    d. Capacity for belly hold cargo = 9 ULDs or around 13,500 kgs (13.5 tonnes)

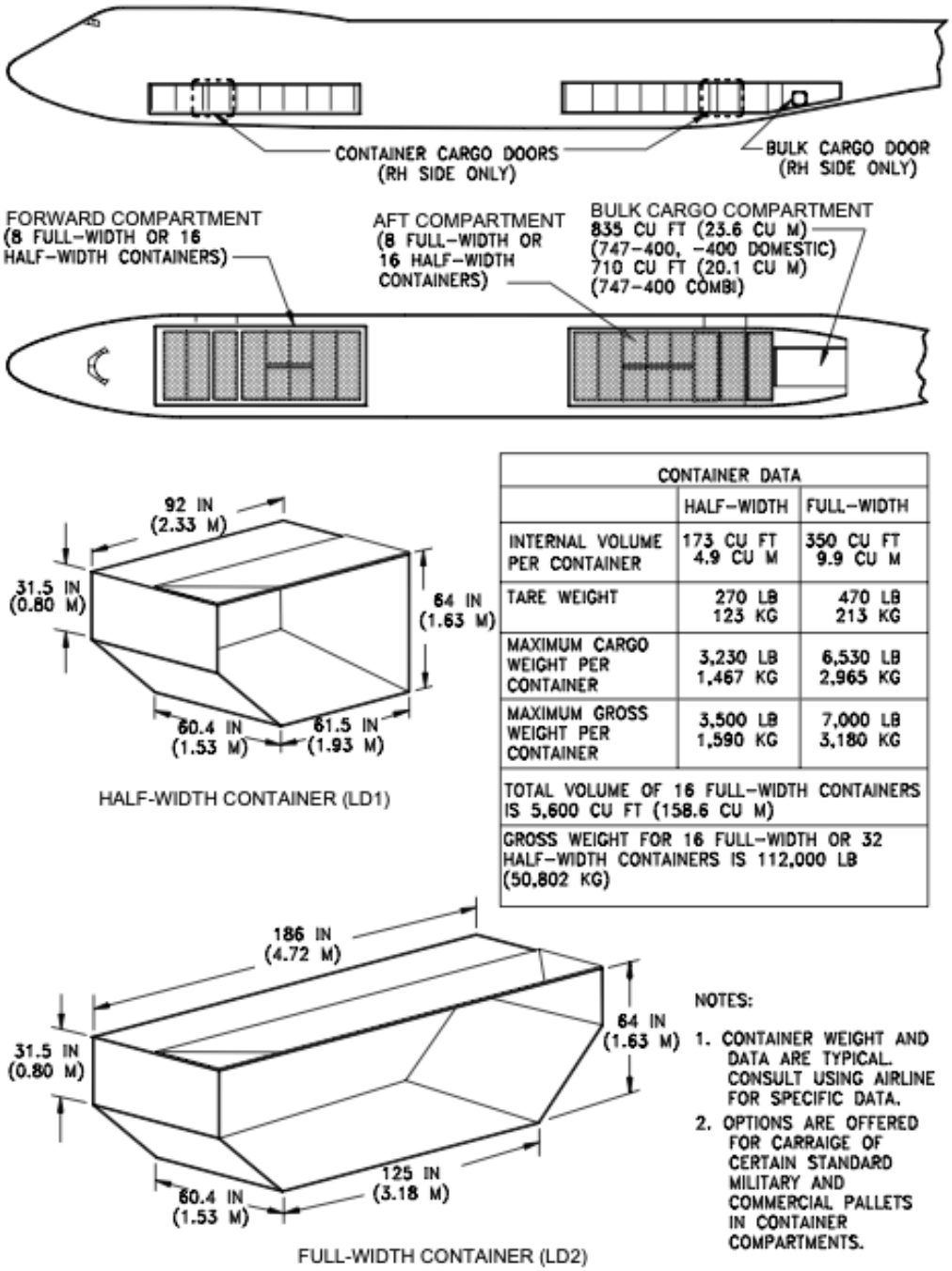
28. In terms of the belly hold capacity reduction in the global passenger fleet due to the phasing out of wide-body aircraft, total figures are difficult to extrapolate. As an indicative example (paragraph 23 above), Airbus has 7,400 firm orders from 121 customers for the A320neo series aircraft (end of May 2021 figures)[21]. Assuming a total swap from wide-body aircraft (for illustrative purposes only), these orders alone would reduce belly hold capacity from 13.5 tonnes per aircraft on the B747-400ER to 3 tonnes on the A321XLR, a difference of 10.5 tonnes per flight as demonstrated above.

29. Multiplying the 10.5 tonne reduction in cargo capacity by an indicative 7,400 (the Airbus firm orders for the A321neo series aircraft) indicates a potential loss of 77,700 tonnes across the new fleet, per rotation. This calculation does not include other aircraft types and assumes all new narrow-body aircraft replace a wide-body aircraft. It is therefore for indicative purposes only. Whilst it is possible that more frequent services carrying fewer passengers would help reduce the impact on belly hold capacity, the move to smaller aircraft and the associated reduction in belly hold capacity for cargo will drive demand for freighters.

[20] A unit load device (ULD) is a container used to load luggage, freight, and mail on aircraft, allowing preloading of cargo (rather than loading loose items) to save turnaround time and ensures the container fits into the aircraft.

[21] https://www.airbus.com/newsroom/press-releases/en/2021/06/united-airlines-orders-70-airbus-a321neo-aircraft.html

Figure 10 **B747-400ER Lower Deck**



CONTAINER DATA		
	HALF-WIDTH	FULL-WIDTH
INTERNAL VOLUME PER CONTAINER	173 CU FT 4.9 CU M	350 CU FT 9.9 CU M
TARE WEIGHT	270 LB 123 KG	470 LB 213 KG
MAXIMUM CARGO WEIGHT PER CONTAINER	3,230 LB 1,467 KG	6,530 LB 2,965 KG
MAXIMUM GROSS WEIGHT PER CONTAINER	3,500 LB 1,590 KG	7,000 LB 3,180 KG
TOTAL VOLUME OF 16 FULL-WIDTH CONTAINERS IS 5,600 CU FT (158.6 CU M)		
GROSS WEIGHT FOR 16 FULL-WIDTH OR 32 HALF-WIDTH CONTAINERS IS 112,000 LB (50,802 KG)		

NOTES:

1. CONTAINER WEIGHT AND DATA ARE TYPICAL. CONSULT USING AIRLINE FOR SPECIFIC DATA.
2. OPTIONS ARE OFFERED FOR CARRAIGE OF CERTAIN STANDARD MILITARY AND COMMERCIAL PALLETS IN CONTAINER COMPARTMENTS.

2.6.1 LOWER CARGO COMPARTMENTS - CONTAINERS AND BULK CARGO

MODEL 747-400, -400 COMBI, -400 DOMESTIC

D6-58326-1

DECEMBER 2002 39

Source: https://www.boeing.com/resources/boeingdotcom/commercial/airports/acaps/747_4.pdf

30. Through UK Research and Innovation (UKRI) and Innovate UK and Future Flight Challenge, the government is funding a number of initiatives that will, “put the UK in the driving seat for

developing the next aviation revolution"[22]. The Business and Industry Minister, Nadhim Zahawi, is reported to have said:

"As the UK leads the way in the aviation revolution, these bold proposals showcase the pioneering spirit of the UK's aerospace and aviation industries in solving global issues from climate change, to getting vital medications to those in need.

This funding for the sector is a testament to the vital role aviation continues to play in maintaining our well-earned reputation for research and development excellence. I look forward to seeing these concepts being developed into tangible products over the coming months and years."

31. Initiatives funded by the UK government cover a wide range of topics including Project NAPKIN (New Aviation Propulsion Knowledge and Innovation Network), which will develop a blueprint for zero carbon aviation across the UK. An Innovate UK project led by Heathrow Airport and with representation from Manston, Project NAPKIN supports UK leadership in aviation innovation and action on climate change and will generate the first detailed model of zero carbon flight in the UK.

32. Whilst these changes to fleet mix are yet to solidify, airport planning is a long-term activity. The technologies currently taking shape will dramatically impact air travel and it seems eminently sensible to future-proof airports in anticipation of their introduction. This is particularly the case in the UK, an island nation with limited land available to construct new runways or new airports. Since the South East is most affected both by lack of land space and by high demand for air travel, efficient aviation utilisation of the Manston runway is vitally important for the future of this country.

33. Together, the quantitative need for the Development relating to the changes in demand for air freight impact the level of need in ways that were not predicted at the time of application nor when the Secretary of State made his original determination. The growth in e-commerce has been nothing less than stellar as Figure 5 shows and with it comes the associated changes to distribution channels. The rebound of the economy and the impact on air freight demand has exceeded 2019 figures, as previously submitted. The need for a fully equipped freight airport such as Manston has never been clearer.

Changes of capacity at other airports

General

34. One situation that has not changed since the 2019 Manston DCO application is the UK's airport capacity. No new capacity has been added to the network (indeed Stansted Airport's cargo capacity cap has reduced) and without Manston, none is likely in the foreseeable future. The lack of infrastructure investment has long been impacting the way goods are transported by air to and from the UK. Indeed, Logistics UK say:

[22] https://www.ukri.org/news/uk-to-lead-the-way-in-the-future-of-aviation/

"*Air freight currently accounts for 40% of UK imports and exports by value and is vital for the UK economy. UK airport capacity is a limiting factor for UK importers and exporters, air freight operators and the wider economy*."[23]

35. Now, post-pandemic, and with the Airports Council International (ACI) reporting a fall in turnover of around 60% and losses of some €12 billion at European airports in 2020, it is predicted that airports could take more than ten years to recover financially from the Covid-19 crisis[24]. This will be to the detriment of investments, already an issue for cargo operations.

36. Globally, goods transported by air are carried 50/50 as belly hold on passenger aircraft and on dedicated freighters[25] [26] [27]. In the UK, the picture is usually (pre-COVID) around 70/30, likely due in part to the lack of capacity for freighters at UK airports, particularly in the South East where demand is highest. The lack of resilience in the UK's reliance on passenger aircraft to carry goods has been sharply highlighted by the COVID pandemic. When passenger numbers reduced dramatically, capacity on the usual freighter routes was insufficient to meet demand. Trucking to and from northern European airports has become the norm for British air freight but this is not without issues, including creating a lack of resilience in UK air transportation.

37. It is clear from examples around the world that providing specialist freight-focused airports is key to attracting freighter traffic. The increase in dedicated freighter flights to compensate for the lack of belly hold capacity has highlighted the benefits of cargo airports, reinforcing problems with congestion at many large airport gateways that were already being experienced. Additionally, many passenger-focused airports have little space for freight operations both within the Restricted Zone and outside. These issues have stimulated growth at a number of freight-focused airports such as Liege, Frankfurt Hahn, and Rockford.

38. For example, Rockford International Airport just outside Chicago has grown exponentially in terms of freight movements. This growth has been driven by growth in both e-commerce and heavy airfreight and seen tonnes of throughput rise by 11% in 2019 and by 15% in 2020 to 1.2 million tonnes[28]. Both UPS and Amazon have hubs at Rockford, with the airport recently attracting Senator International using B747-400Fs on a weekly route between Hahn, Germany and Spartanburg-Greenville to Rockford, using it as its US Midwest hub. Additionally, DB Schenker National Airlines now operate a weekly freighter operation connecting Rockford with Tokyo and Seoul via Munich. It should be noted that Rockford is around one hour drive time from Chicago O'Hare, much the same distance as Manston Airport is from London Heathrow.

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[23] https://logistics.org.uk/getattachment/Components/Link-Boxes/Modes-of-Transport/Air/Air-Freight-Achieving-sustainable-growth/Logistics-UK-call-to-action-report.pdf?lang=en-GB

[24] https://www.archyde.com/more-than-ten-years-to-recover-from-the-covid-crisis-say-european-airports/

[25] https://www.boeing.com/commercial/market/cargo-forecast/

[26] See Chart 5 IATA February 202 (Appendix 1) for example

[27] https://www.willistowerswatson.com/en-GB/Insights/2021/01/covid-19-impact-on-the-air-cargo-industry

[28] https://theloadstar.com/chicago-rockford-airport-expands-cargo-facilities-as-freighter-traffic-grows/

Heathrow Airport

39. Between February and December 2020, the Airports National Policy Statement had no effect but has now been reinstated. Heathrow Airport Limited's website says that HAL are, "currently consulting with investors, government, airline customers and regulators on our next steps"[29].

40. On 6 May 2020 John Holland-Kaye told the Transport Select Committee ('it' being the third runway)[30]:

    "As to when and whether it will be needed, we will have to see how things turn out over the next few years. If we are successful in rebuilding the UK economy, we will need it in 10 to 15 years' time. If we are not, we are all in a very different world."

41. It is therefore no longer certain that the new runway will go ahead at all, and if it does it will not be operational until at least 2030-35, significantly increasing the gap between Manston and the Heathrow Third Runway becoming operational compared with expectations during the examination of the Manston application. In contrast, the Examining Authority appeared to agree with the case of Stone Hill Park Ltd that the Heathrow Third Runway opening in 2026 was realistic (see paragraph 5.6.15 of the Recommendation Report) and so its conclusions based on that assumption can be given little weight.

42. In April 2021, it was reported by the Telegraph newspaper that HAL faces opposition from some board members to its plan to raise £2.8 billion from airlines and customers by increasing airport prices[31]. The newspaper reported that State-backed Qatar Airways, whose owner is also HAL's second-largest shareholder, describes the plan to raise funds as "unreasonable, not in the consumer interest and should be rejected". Qatar also owns 25% of IAG, who own British Airways, which is the largest operator at Heathrow.

43. Notwithstanding the decades of difficulties and the ongoing situation, even if Heathrow's third runway is eventually constructed, it is unlikely to be able to accommodate the pent-up demand that will have built up by 2030. It is likely the airport will continue to focus on the passenger market and to handle belly hold freight from these flights. With the need to increase passenger numbers post-COVID to help rebuild revenues, increasing slots available to passenger aircraft will, as with Stansted Airport (see below), require a decrease in cargo movements. The problem of suitable slots for freighters is therefore likely to be exacerbated.

Stansted Airport

44. In terms of freighter movements outside Heathrow, Stansted has remained fairly constant between 2019 and 2020 with tonnage on freighters up by just 34,000. The recent (January 2021) Stansted Airport planning appeal inquiry followed Uttlesford District Council's decision in January 2020 to reject the airport's expansion from 35 to 43 million passengers a year. At the end of May 2021, the Planning Inspectorate concluded that: "Overall, the balance falls overwhelmingly in favour of the grant of planning permission."

45. Since expansion focuses on an uplift to passenger numbers without an increase in Air Transport Movements (ATMs), Stansted Airport's owners, Manchester Airports Group (MAG), made clear

[29] https://www.heathrow.com/company/about-heathrow/expansion/plan-overview

[30] https://committees.parliament.uk/oralevidence/348/pdf/

[31] https://www.telegraph.co.uk/business/2021/04/10/heathrow-risks-boardroom-split-plan-raise-28bn/

that their focus is on the passenger market rather than freight. To this end, they sought permission to reduce the cargo ATM cap from 20,500 to 16,000 and maintain their overall ATM cap at 274,000, thereby increasing allowable passenger ATMs. The Examining Authority concluded at paragraph 5.6.26 of the Recommendation Report that 'there is no clear evidence of the Applicant's view of Stansted's strategic choice to prioritise passengers over freight'. There is now clear evidence and so the Examining Authority's conclusions can be given little weight on this aspect.

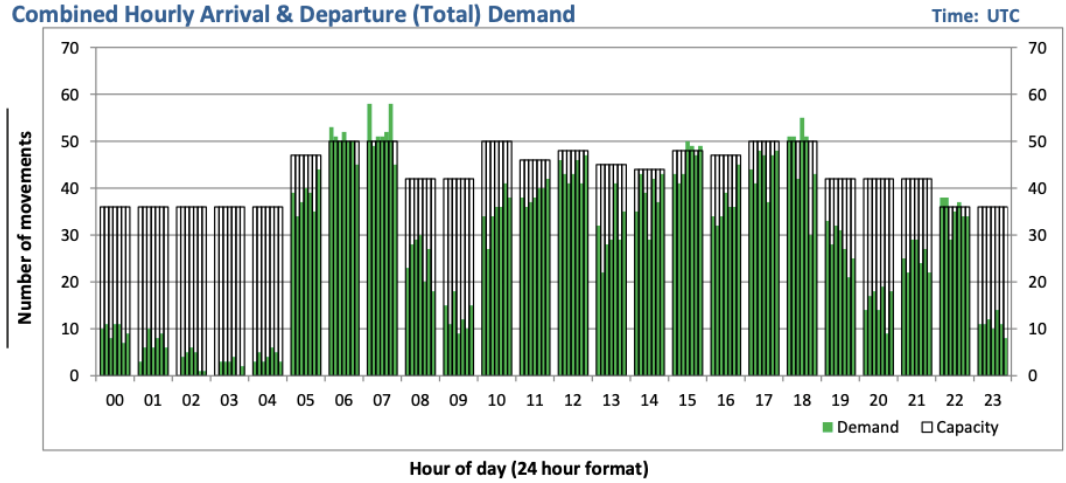
46. Prior to the COVID crisis, the airport was experiencing pressure on peak time slots. For the Low-Cost Carriers (LCCs), which dominate at Stansted, to schedule four rotations per day, they need to leave early and make the last arrival as late as possible. This is shown in Figure 11, Stansted's Initial Coordination Report, which depicts the planned utilisation of Stansted's runway for Summer 2020. The airport would have been at capacity at 06.00 and 07.00 and 12.00, 15.00 and 18.00 and nearing capacity at several other times during the day.

47. Whilst the graph indicates available capacity at some periods during the day, Stansted has restrictions on the numbers and types or aircraft that are allowed to operate between the hours of 23:30-07:00 hours. The noise limit reduces from $94_{LMax\ (dB)}$ during the daytime to $89_{LMax\ (dB)}$ between 06:00-07:00 and 23:00 and 23:30. Noise limits reduce further to $87_{LMax\ (dB)}$ between 23:30 and 06:00. Aircraft rated QC4 or above cannot be scheduled to take off or land during the night period, 23:30 to 06:00. For QC8 and QC16 aircraft, this requirement is extended to a complete ban on operations between 23:00 and 07:00.

48. These restrictions, plus the pressure on the airport from passenger operations once recovery from COVID is complete, may well prevent any new sustainable freighter operation from using Stansted Airport. Airports require flexibility and 'fire breaks' so late running aircraft can be accommodated without causing knock-on delays and associated issues. It is important to note that no cargo airline would be able to build a strategy on just a few hours of available slots at Stansted. Additionally, freighters can often wait to be loaded/unloaded since the same staff may be working on passenger aircraft and freight can take second place.

49. As such, it is highly unlikely there will be investment in additional freight capacity at Stansted. As with most airports, particularly in the South East, space is at a premium and zoning for cargo processing facilities and warehousing is not expected. In terms of capacity forecasting, some additional capacity may be found at Stansted, particularly before the passenger market returns to normal. However, with an uncertain future, freight forwarders may be reluctant to grow their business at the airport.

Figure 11 **Hourly runway demand at Stansted Airport**



Source: https://www.acl-uk.org/wp-content/uploads/2019/11/STN-S20-Initial-Coordination-Report.pdf

East Midlands Airport

50. East Midlands performed well in 2020 despite the pandemic, increasing tonnage through the airport by almost 46,000 and Cargo ATMs (CATMs) by 2,730, an average of more than seven movements and 126 tonnes per day averaged across the year. East Midlands Airport saw a 10% increase in freighter movements at the end of March 2020 as the UK and other EU countries rushed to import medical equipment. During the first wave of the pandemic, East Midlands had a 20% increase in the volume of goods it handled, with the airport handling over a million parcels on occasions. Weekly flights from China, Hong Kong, and those via Moscow transformed the airport from a UK hub to European cargo hub[32], demonstrating the potential for a South East UK cargo hub such as Manston, which would be considerably closer to Europe and to the major conurbation of the London area. Further details of air transport movements and tonnage are provided in the following section.

51. In contrast to the e-commerce market that Manston is targeting, East Midlands focuses on the integrator market, being the UK hub for DHL and UPS, and providing support operations for TNT and Royal Mail. This market is growing and may well fulfil East Midlands' forecast for 618,000 tonnes by 2040. Since 2019, UPS and DHL have opened their new facilities at East Midlands Airport. However, without an increase in the number of stands available to freighter aircraft, the airport is unlikely to be able to handle all the warehouse capability created. Kuehne + Nagel, SEGRO Logistics and Amazon have airside premises near East Midlands Airport but without direct access to the runway.

52. The airport also has a vibrant passenger operation. However, whilst there is not a runway capacity issue, the lack of facilities for non-integrator flights and the requirement for additional aircraft stands may create problems for other scheduled and ad hoc operators.

53. The airport is to be part of one of eight new English Freeports, based around the East Midlands Airport and Gateway Industrial Cluster (EMAGIC) in northwest Leicestershire, Uniper's

[32] https://www.willistowerswatson.com/en-GB/Insights/2021/01/covid-19-impact-on-the-air-cargo-industry

Ratcliffe-on-Soar power station site in Rushcliffe in Nottinghamshire and the East Midlands Intermodal Park (EMIP) in south Derbyshire.

54. In a House of Commons Regional Airports debate on 7 July 2021[33], local MP Ben Bradley covering noted that despite it being the largest freight-only airport East Midlands Airport still gets two thirds of its income from passenger flights.

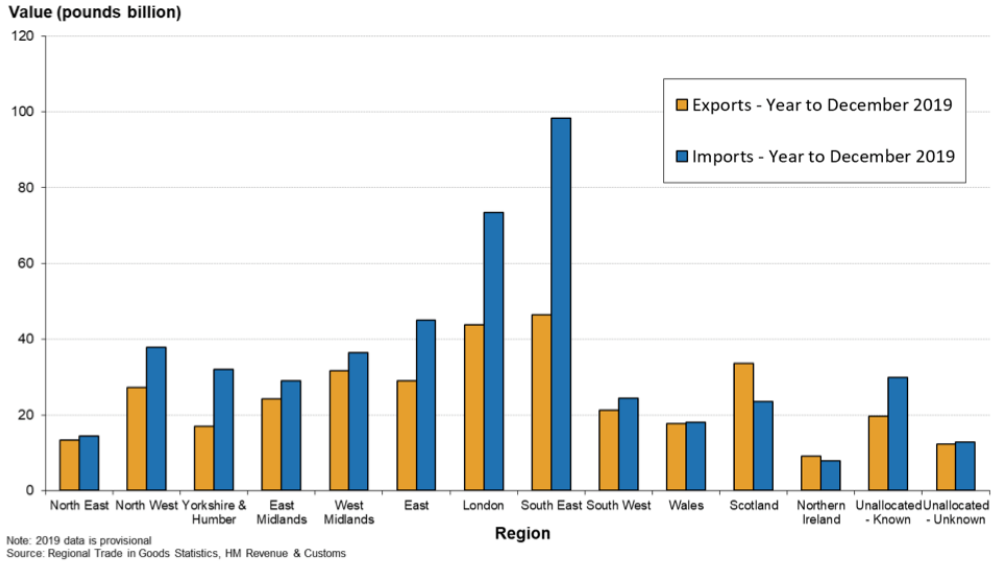
55. It is clear that both runway and cargo capacity at other airports since 2019 has not changed but, by its limitations highlighted in the last two years, demonstrates an increased quantitative need for the Development.

Locational requirements for air freight

56. The COVID pandemic has reaffirmed the locational case for Manston Airport submitted to the Planning Inspectorate in 2019 - that demand for air freight is greatest in the South East. Evidence from airlines provided to the Applicant confirms that charges at Heathrow are considerably above other airports. Nonetheless, even when space at specialist airports such as East Midlands was available, the market chose the London area for its operations. This is evidenced by the UK's CATMs when comparing the London area with all reporting airports, as in the paragraphs shown below, and when considering the origin and destination of the UK's imports and exports.

57. Import and export data for the UK by region, as shown in Figure 12, provides supply-side intelligence. Manston's catchment area covers the South East, London and the East (particularly after the construction of the Lower Thames Crossing). As Figure 12 shows, these are the three largest import areas by value, with London and the South East the two largest export areas. 2019 figures have been used to exclude the impact of the COVID pandemic.

Figure 12 2019 UK exports and imports by region



[33] https://hansard.parliament.uk/commons/2021-07-07/debates/1C7565D3-D56B-46CD-B769-0D705318C7ED/RegionalAirports

Source: https://www.uktradeinfo.com/media/mlmpx5dd/rts_q4_2019.pdf

58. The importance of import and export origin and destination in the UK has been very clearly highlighted by the behaviour of airlines during the COVID pandemic. To April 2021, the London area airports (Gatwick, Heathrow, Luton and Stansted) handled 66% of the total reporting airports' tonnage (as shown in Table 1) and 51% of the CATMs (Cargo Air Transport Movements), almost as many in the London area in 2021 (January to April) as at all reporting airports in 2018 (as shown in Table 2). (Note that April is the latest CAA data available at time of reporting).

Table 1 Cargo aircraft tonnage 2018 to 2021, January to April

Tonnes Jan to April	Total London area	Total reporting airports	% London area of total
2018	112,472	247,793	45%
2019	108,402	249,649	43%
2020	132,526	269,152	49%
2021	359,075	546,244	66%

Source: CAA data Table 15

Table 2 CATMs 2018 to 2021, January to April

CATMs Jan to April	Total London area	Total reporting airports	% London area of total
2018	4,618	17,619	26%
2019	4,906	18,215	27%
2020	6,631	20,949	32%

2021	17,008	33,260	51%

Source: CAA data Table 6

59. Heathrow increased its freighter movements by more than 800% in 2020 compared to 2019, and by a further 483% between 2020 and 2021 (January to April only – at the same rate this equates to around a 156% increase for the year) demonstrating that, even with relatively high charges compared to other options, the market requires capacity in the South East. Gatwick had the second greatest percentage increase after Heathrow, by nearly 150% from 48 CATMs in 2019 to 118 in 2020. Gatwick had 82 CATMs for the first four months of 2021.

60. Not all airports increased their freighter movements, with Luton, Birmingham and Prestwick reporting fewer in 2020 than in 2019, as shown in Table 3. Overall, the number of cargo flights increased by 54%. The total air cargo tonnage at all reporting airports was down by 21%, from 2.5 million tonnes in 2019 to 2 million in 2020, due to a fall in passenger airliner belly hold capacity not being available.

Table 3 CATMs at key UK airports in 2020 and 2019

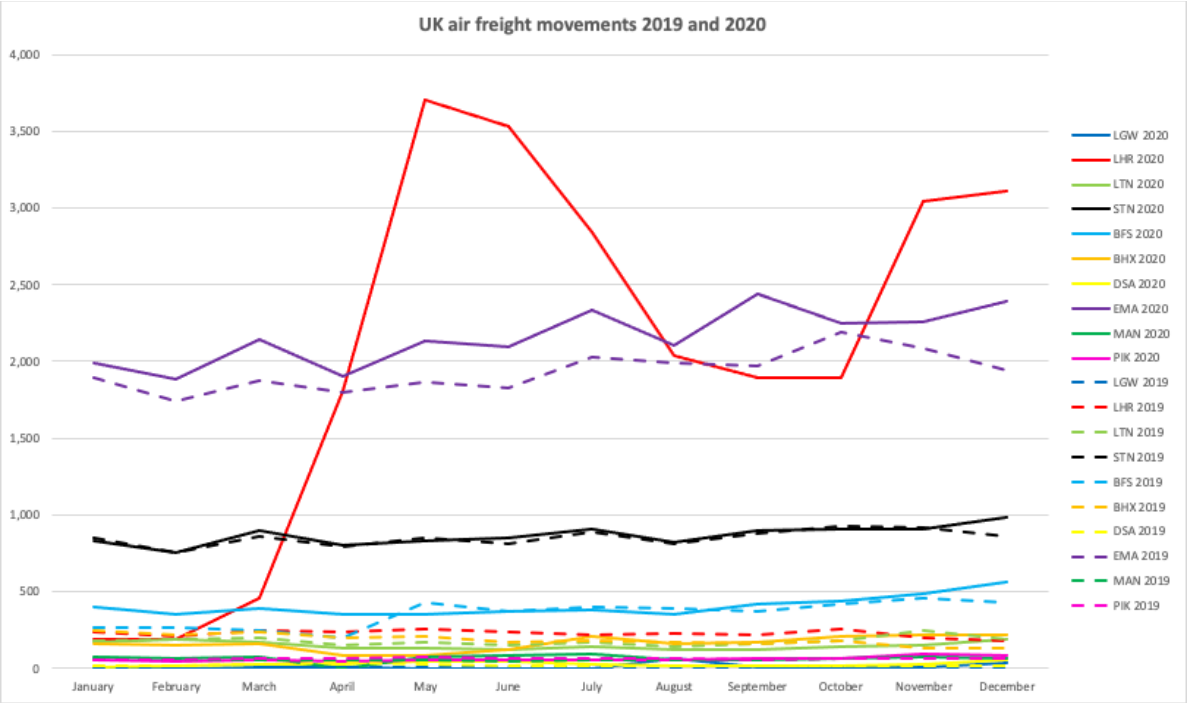
	2020	2019	% change
Gatwick	118	48	145.8%
Heathrow	24,717	2,728	806.0%
Luton	1,798	2,117	-15.1%
Stansted	10,406	10,208	1.9%
Belfast Int	4,853	4,246	14.3%
Birmingham	1,960	2,227	-12.0%
Doncaster	328	250	31.2%
East Midlands	25,932	23,202	11.8%
Manchester	779	696	11.9%

Prestwick	728	764	-4.7%
Total	71,619	46,486	54.1%

Source: CAA data Table 6

61. East Midlands increased from 23,202 CATMs in 2019 to 25,932 in 2020, a nearly 12% rise. As shown in Figure 13, Stansted remained fairly consistent between 2019 and 2020. Doncaster-Sheffield, keen to move into the air freight market, increased from 16 CATMs in 2019 to 52 in 2020. Belfast International also increased CATMs, from 426 in 2019 to 560 in 2020.

Figure 13 UK freighter movements, 2020 compared to 2019



Source: CAA

62. In terms of tonnage, Table 4 shows the belly hold figures at key airports, which quite naturally plummeted, particularly for Heathrow. However, the airport did begin to regain tonnage after May 2020, as shown in Figure 14.

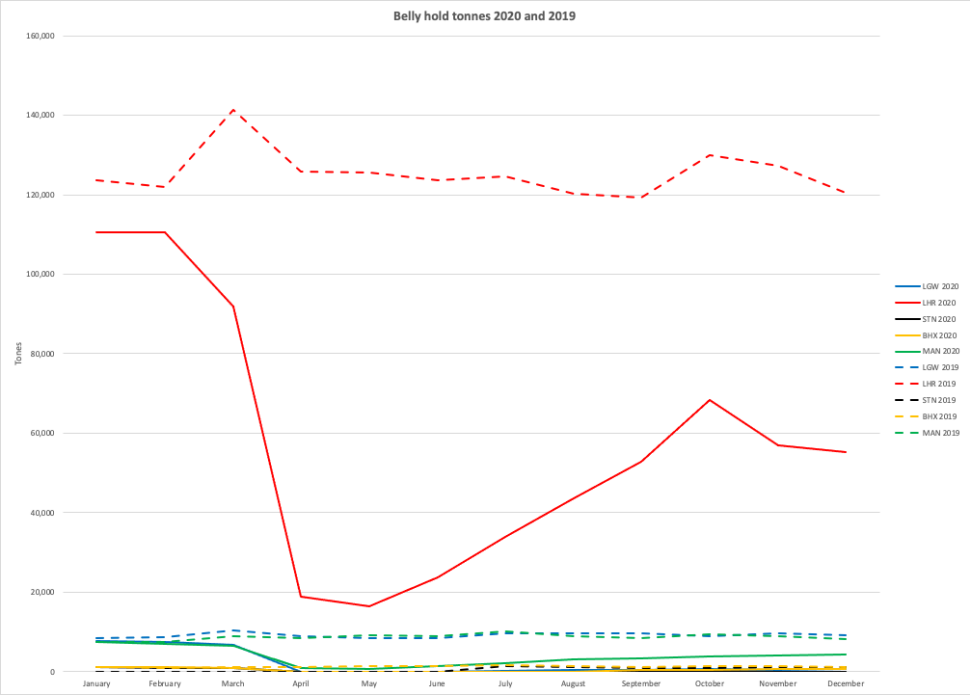
Table 4 Belly hold tonnes at key UK airports in 2020 and 2019

	2020	2019	% change
Gatwick	24,706	110,149	-77.6%

Heathrow	682,755	1,503,731	-54.6%
Stansted	3,263	6,874	-52.5%
Birmingham	5,388	15,764	-65.8%
Manchester	44,448	104,634	-57.5%
Total	760,560	1,741,152	-56.3%

Source: CAA data Table 15

Figure 14 **UK belly hold tonnes, 2020 compared to 2019**



Source: CAA

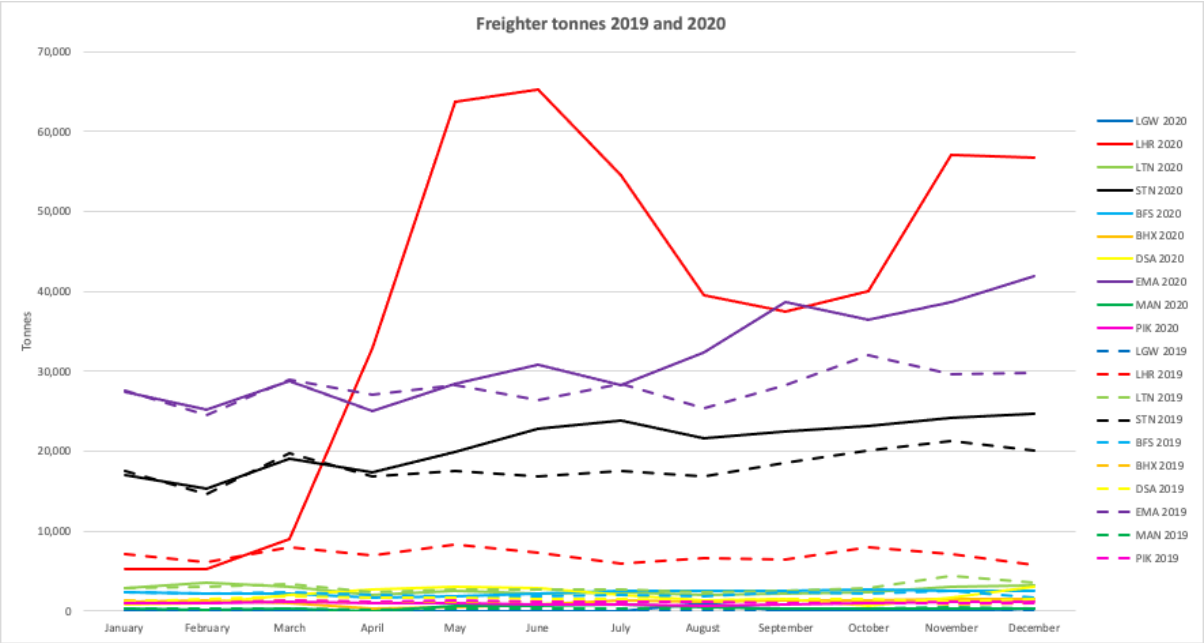
63. Table 5 and Figure 15 show the tonnage carried on freighter aircraft at key UK airports. Heathrow experienced the greatest growth, with East Midlands and Stansted also showing increases. Freighter tonnage at some airports, such as Luton, Birmingham and Prestwick reduced.

Table 5 Freighter tonnes at key UK airports in 2020 and 2019

	2020	2019	% change
Gatwick	1,357	207	555.6%
Heathrow	466,555	83,759	457.0%
Luton	31,081	35,408	-12.2%
Stansted	251,309	217,266	15.7%
Belfast Int	27,821	25,080	10.9%
Birmingham	13,162	14,102	-6.7%
Doncaster	22,572	17,638	28.0%
East Midlands	381,944	335,947	13.7%
Manchester	4,487	3,747	19.7%
Prestwick	12,049	13,047	-7.6%
Total	1,212,337	746,201	62.5%

Source: CAA

Figure 15 **UK freighter tonnes, 2020 compared to 2019**



64. During the COVID crisis, other airports with freight capability, as shown in the figures above, were unable to step in to handle increased CATMs/tonnage of air freight. Prestwick, Doncaster-Sheffield and Birmingham were not the airports of choice for airlines, with only Heathrow picking up a huge amount of business. Doncaster-Sheffield managed 22,500 tonnes in 2020, an increase of 28% on 2019, but not at the 40,000 tonnes per annum by 2022/2023 (200,000 tonnes in the long-term) predicted in the airport's Masterplan.

65. Cross Channel truck traffic at Port of Dover reduced slightly by just over 4%, from 2,397,270 road haulage vehicles in 2019 to 2,268,525[34]. For Eurotunnel traffic, trucking numbers reduced by 9% from 1,595,241 in 2019 to 1,451,556 in 2020[35].

66. It is imperative to note that assessing capacity for cargo is quite different from passenger markets and general runway capacity. Many commentators believe that spare capacity at passenger focused airports can be simply 'allotted' to freighter use. This is not so for a number of reasons. Firstly, passenger operations, particularly the LCCs, generally aim for a 45-minute turnaround, providing intense usage of aircraft stands and generating a predictable income. However, a freighter could be on the stand for many hours, which impairs the airport's strategy.

67. Secondly, it seems to be a widely held belief that freighters prefer to operate at night. This is only sometimes true, particularly for the transportation of overnight mail and packages. However, given the opportunity of available matching slots at the departure and arrival airport, cargo operators may prefer daytime operations. For example, as previously mentioned, 70% of Amazon Air's departures occur between 06.00 and 22.00, a less nocturnal orientation than FedEx Express or UPS[36]. This, and the general move to banning night-time operations, means

[34] https://www.doverport.co.uk/about/performance/

[35] https://www.getlinkgroup.com/content/uploads/2021/01/210121-2020-traffic-revenue.pdf

[36] https://las.depaul.edu/centers-and-institutes/chaddick-institute-for-metropolitan-development/research-and-publications/Documents/Amazon%20Air%20Primed%20and%20Positioned%20final.pdf

that ‘spare’ capacity for cargo at UK airports cannot simply be calculated on 24-hour runway usage.

68. Together, the quantitative need for the Development relating to the locational requirements for air freight have been highlighted during the COVID pandemic. A large proportion of the increased freighter traffic has chosen the South East, and this increases the level of need for Manston Airport since the DCO submission in 2019.

69. The locational case for Manston Airport has further benefited from the announcement, in the March 2021 budget[37], that the government will create eight new Freeports in England. Manston Airport would benefit from both the Thames Freeport and the Solent Freeport which are both expected to create a regional hub for trade, innovation and commerce.

The effects of Brexit and/or Covid

70. The impact of COVID on air freight has been considerable and necessitated an increase in freighter movements, as detailed previously. In their February 2021 report, Logistics UK say:

> “*Aviation is vital for new opportunities and growth post-Brexit, and to the UK’s economic recovery from the COVID-19 pandemic. Our air links, not least those with our largest trading partners including the US, are not a frivolous luxury. They connect Britain with the world and link British products and expertise with billions of potential buyers overseas. Pre-pandemic, some 49% of the total value of UK exports outside of the EU travelled by air, across a combination of dedicated freighters and onboard passenger flights*.”[38]

71. Whilst Brexit stems from political issues from which we need to make the best and COVID from biological from which we need to recover, the effects have been felt across the aviation sector with some similar repercussions. COVID in particular has demonstrated the issues with over-reliance on passenger aircraft and their belly hold capacity for emergency and basic supplies. The demand for air freight cold chain logistics for healthcare products increased vigorously[39] and is likely to continue to do so in the future.

72. Brexit has highlighted that trucking to and from European airports reduces the UK’s supply network resilience. The uptick in e-commerce that resulted from COVID and is likely to persist means that just-in-time and next day deliveries are no longer simply an ambition but a customer expectation and driver of competitiveness.

73. The increased need to trade further afield as the recent trade deal with Australia and the government’s commencement of negotiations to join the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (11 countries including Australia, Canada and Japan) demonstrate the expansion of destinations where trucking is not possible and where perishable

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[37] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/966868/BUDGET_2021_-_web.pdf

[38] https://logistics.org.uk/getattachment/Components/Link-Boxes/Modes-of-Transport/Air/Air-Freight-Achieving-sustainable-growth/Logistics-UK-call-to-action-report.pdf?lang=en-GB

[39] https://www.businesswire.com/news/home/20210616005448/en/Global-Air-Freight-Market-Report-2021-Growth-Trends-COVID-19-Impact-and-Forecasts-to-2026---ResearchAndMarkets.com

and time sensitive goods and those demanded within short timescales will require air freight transportation.

74. Markets in Africa are also strengthening, and the continent continues to be an investment hub with several emerging economies. Improving economies in Africa are driving the continent's air cargo and logistics sectors with both in-bound and out-bound requirements including fresh produce, pharmaceuticals and natural resources. With the launch of the Single African Air Transport Market (SAATM) in January 2018, liberalisation of the aviation sector, including air cargo, will increase aviation's role as an economic driver, support social and political integration, and boost trade and tourism. IATA data for April 2021 show that airlines in African regions are posting strong volume performance[40]. This provides huge opportunities for trade, accessibility and connectivity, with UK airports needing to be ready to respond.

75. The increase in dedicated freighter flights to compensate for the lack of belly hold capacity during the COVID pandemic has highlighted the benefits of cargo airports, reinforcing the problems with congestion at large airport gateways. Having the right infrastructure for cargo operations will be vital as Brexit continues to impact UK trade.

76. A report published by the Centre for Economics & Business Research (July 2021)[41] highlights how the UK could undergo an economic pivot post-Brexit, with non-EU trade potentially increasing by 20% over the next five years from nearly £473 billion in 2019 to £570 billion in 2025. The aviation industry, in particular air freight[42], is critical to the Government's plans for a Global Britain post-Brexit. This trade boost will not be realised unless the UK's aviation industry is supported by Government policies. This view was supported at the House of Commons Regional Airports debate, on 7 July 2021[43], where the minister described regional airports as *'critical regional and national infrastructure'* and *'regional airports are vital for levelling up'*.

77. The impact of COVID on UK belly hold capacity has very clearly demonstrated the need for freighter aircraft capability and for airports, particularly in the South East, that are fully equipped to meet the needs of this market. Brexit and its ongoing effects reinforce the need for Manston Airport.

78. The result of capacity constraints in the UK airport network, and particularly in the South East, has been the trucking of considerable amounts of cargo to Northern European airports to access available capacity. Previous research[44] undertaken on 2018 data for outbound Road Feeder Services (RFS) looked at mid-week movements for 15 out of 50 cargo carriers for those routes reported. Extrapolating from this data shows that around 41,800 annual RFS truck journeys are made to European airports, including Amsterdam-Schiphol, Brussels, Paris-Charles de Gaulle and Frankfurt Main.

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[40] https://www.iata.org/en/iata-repository/publications/economic-reports/air-freight-monthly-analysis---april-2021/

[41] https://cebr.com/wp-content/uploads/2021/07/Cebr-Report_Heathrow_Airport-20210707.pdf

[42] https://www.aircargonews.net/business/supply-chains/soaring-e-commerce-and-the-need-to-support-aviation/

[43] https://hansard.parliament.uk/commons/2021-07-07/debates/1C7565D3-D56B-46CD-B769-0D705318C7ED/RegionalAirports

[44] See Azimuth Report Volume I Section 6.4 submitted as part of the Manston Airport DCO inquiry https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR020002/TR020002-002459-7.4%20-%20Azimuth%20Report.pdf

79. Since the decision on the Manston DCO, this figure has been validated by the Airline Operators Committee at Heathrow[45], where they believe around 100 to 125 export RFS trucks per day and approximately the same for imports connect with the airport. This equates to between 36,500 and 45,625 truck movements each way per annum. Whilst the average payload is unknown, as reported to the Inspectorate in the Azimuth Report Volume I, at 19.4 tonnes (midway between the maximum load on a six metre, two-axle tractor unit of 10.6 tonnes and the maximum on a 12 metre, three-axle tractor of 28.1 tonnes) per truck this equates to in excess of 700,000 tonnes of air freight per year in each direction.

80. In addition, forwarders report that cargo booked onto a passenger flight can be denied loading in favour of other customers, usually large integrators. This 'bumping' may happen numerous times before the goods are loaded into the belly hold of a passenger flight or the shipper decides to use a different route or transport by road to another airport, often outside the UK. The quantity of air cargo trucked to Europe through bumping is unknown but could be substantial and has increased since the COVID crisis, due to the lack of cargo capacity on aircraft.

81. An additional factor with the issue of trucking is the impact of the UK's withdrawal from the EU. This has added friction at Channel crossings, increasing the time and cost of trucking air cargo to non-UK airports[46]. It has also led to a shortage in truck drivers[47]. Whilst the friction due to paperwork, currently frequently incorrectly completed and resulting in refused transport[48], may abate, French blockades could continue to cause chaos at Channel Crossings. This particularly impacts the transportation of perishables and time sensitive goods, including both those destined for EU countries as well as those that are UK air cargo flying from/to European airports.

82. Manston Airport would alleviate the need for much of the trucking to and from northern European airports. This is not only an environmental benefit but ensures the UK is resilient by onshoring its own transportation needs.

Growth in world freighter fleets

83. Boeing forecasts predict that the global freighter fleet will grow by more than 60% the next two decades to over 3,260 aircraft as shown in Figure 16. This growth comprises a combination of 4% annual average traffic growth, measured in freight tonne-kilometres (FTKs) and a proven need for dedicated freighter capacity. By 2039, 2,430 freighters are forecast to be delivered, with around half replacing retiring airplanes and the remainder required to meet forecast traffic growth. Around a third of these deliveries will be widebody aircraft and two thirds will be conversions from passenger aircraft.

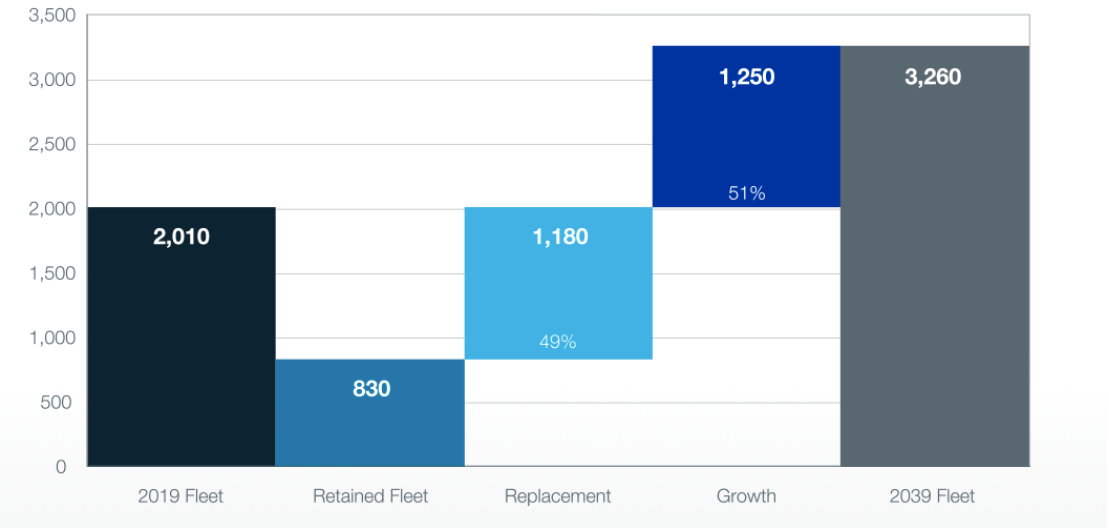
[45] CILT/David Parish email 26 January 2021

[46] https://www.ft.com/content/1001c054-0cf9-4f30-a62a-c9ac91e58223

[47] https://www.theguardian.com/business/2021/jun/28/lorry-driver-shortage-uk-government-and-retailers-in-emergency-talks-covid-brexit

[48] https://www.telegraph.co.uk/technology/2021/01/14/one-10-deliveries-uk-eu-turned-back-border-amid-post-brexit/

Figure 16 **Global freighter fleet growth and replacement**



Source: Boeing (https://www.boeing.com/commercial/market/cargo-forecast/)

84. Conversions include demand for Boeing's 737-800, 767-300ER, 757 and 737 Classic and Airbus' A330-200, A330-300 and A321-200[49]. There may also be potential for a B-777 cargo conversion, which may become attractive to carriers due to lower feedstock prices across the market. However, in passenger markets, there is a current trend towards using single-aisle twinjets (such as the B-757 and the upcoming A321XLR) on long 'thin' passenger routes, which has become more prevalent following the current drop in passenger demand caused by the COVID-19 pandemic[50]. Indeed, AeroDynamic Advisory expects twin-aisles to comprise just 16% of jetliner production after the crisis, compared to 24% before[51].

85. This may impact narrow body freighter use although demand may depend on region and market. Nonetheless, there is increasing demand for passenger-to-freighter (P2F) conversions, in particular the B737 Next Gen passenger aircraft variant, with the B737 Classic types overtaken by the B737-800 for conversions[52]. Conversions of the A321-200 are also beginning to gather pace. Since May 2020, the active fleet of narrow-body freighters has grown from 61 to 625 aircraft, with converted B737-800s accounting for around half this number.

86. New entrants to the market include SmartLynx Malta, who are planning to add two A321Fs in 2021 and up to four during 2022, with the objective of becoming one of the largest narrow-body cargo freight carriers within the next three years[53]. This compares to the growth in the mid-size widebody freighter fleet, which has grown in the same period by 80 to 624 aircraft. The B767-300ER is the most prevalent, accounting for more than half the growth. The A330 freighter fleet is growing strongly (six during this period) but from a much lower starting point.

[49] https://aviationweek.com/mro/boeing-boost-cargo-conversion-capacity-freighter-market-heats

[50] https://simpleflying.com/boeing-757-fall/

[51] https://aviationweek.com/aerospace/aircraft-propulsion/opinion-why-air-cargo-growth-could-accelerate-after-pandemic

[52] https://aircargoeye.com/freighter-demand-takes-off-triggering-more-p2f-conversions/

[53] https://theloadstar.com/new-entrants-dip-their-wings-into-a-new-normal-strong-air-cargo-market/

87. The large widebody freighter fleet has expanded from 55 to 601 aircraft since May 2020, with 29 B747-400s and seven MD-11Fs brought out of storage and accounting for around half the growth. The remainder include factory deliveries of 22 B777Fs and three B747-8Fs[54]. It was reported[55] in May 2021 that Qatar Airways is interested in purchasing a large number of freighters to replace an ageing fleet. These may potentially be freighter version of the future 777X jetliner, although this version has not yet been approved by the Boeing Board. Airbus is also reportedly gauging airline interest in a freighter version of its A350 passenger jet.

88. The continuing growth in world freighter fleets[56] demands support from airports equipped to handle them. This does not simply mean having runway availability but fully functional stands, the latest equipment so ground handling is fast and efficient, rapid access to airspace without the need to hold over large conurbations such as London, warehousing and storage facilities employing the latest technologies, and smooth and environmentally friendly connecting ground transportation. All of this Manston Airport can provide.

Increasing competitiveness in the air freight market

89. Whilst booking space on a cargo airline was protected by third party involvement through freight forwarders, customers are increasingly able to access multichannel booking platforms. Companies such as Lufthansa Cargo now have proprietary e-booking capabilities and are moving to open up their systems. Other examples include the cargo.one booking platform by a Berlin-based company founded in 2017, which gives access to real-time prices and available capacities of multiple airlines. The digital platform processes annualized volumes in Europe of more than 110,000 shipments and 45,000 tonnes with 15 airline partners including Lufthansa Cargo, Finnair Cargo, Etihad Cargo and All Nippon Airways Cargo. This and similar products allow cargo shipments to be booked as easily as booking a passenger flight on a platform such as Kayak or Skyscanner, enabling airlines to distribute their cargo capacity efficiently and reach a broader audience[57].

90. The air freight sector has traditionally been somewhat fragmented although dominated by some global major players. A combination of increased demand for freighter transportation, increased conversions of passenger aircraft to freighters, and the ability for customers to book online through a much easier, direct process has potentially opened the way for low-cost cargo carriers (LCCCs). Enticed by high air freight rates and with none of the legacy issues of incumbent cargo airlines, these new entrants can operate on previously under-served routes as well as busy 'thick' routes[58]. New entrants may also be able to address the growing focus on environmental issues rather quicker than incumbents.

91. As a completely rebuilt facility, Manston will be able to provide slots for new entrants and to design and operate a modern cargo airport, equipped around the growing need for state-of-the-

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[54] https://aircargoeye.com/freighter-demand-takes-off-triggering-more-p2f-conversions/

[55] https://www.reuters.com/business/aerospace-defense/exclusive-boeing-offers-new-777x-freighter-qatar-eyes-order-airline-says-2021-06-03/

[56] https://aviationweek.com/mro/aircraft-propulsion/more-narrowbodies-line-cargo-conversion

[57] https://www.eu-startups.com/2020/12/berlin-based-cargo-one-a-real-time-booking-engine-for-air-cargo-raises-e34-3-million-as-demand-soars-globally/

[58] See for example https://theloadstar.com/new-entrants-dip-their-wings-into-a-new-normal-strong-air-cargo-market/

art technological, digital and environmental innovations will support competitiveness in the freight market.

Global trade wars

92. Aside from environmental impacts, which government funding projects such as the FlyZero programme are addressing, one of the few negative issues impacting air freight is the economic pain cause by trade wars. Escalation of protectionist issues and geopolitical tensions generally work against economic integration and global trade.

93. The ongoing struggle for supremacy between the US and China may continue to impact the rest of the world economically, which in turn impacts air freight demand. In the UK, the aerospace industry supplies high value components to aircraft manufacturers in the US. Chinese tariffs on US aircraft have resulted in lower demand for aircraft and, as a consequence, lower demand for components.

94. Whilst traditional 'analogue sovereignty', which controls territory, resources and people, remains a necessary state function, digital power, which controls data, software, standards and protocols is mostly beyond state control and arguably in the hands of global tech companies[59]. This is an arena that can escalate in the physical world, increasing the likelihood of continued or new trade wars.

95. Whilst air freight may experience considerable negative impact from trade wars, passenger belly hold capability is more likely to be affected. Dedicated freighter operations are quicker to respond to the need for flexibility and can divert to other airports and/or countries should the need arise. Passenger routes in affected zones are more likely to be cancelled, potentially at short notice, removing their belly hold capacity. Cargo airlines therefore offer more protection to supply routes, as the COVID pandemic has demonstrated. Manston Airport is located close to the key UK markets and will be equipped to support flexible cargo operations.

96. The changes and the impacts on the level of need from those changes as demonstrated in the previous sections, indicate a robust long-term need for the Development. The quantitatively described data provided here is further evidence that the Applicant's forecast is realistic and achievable.

[59] https://www.ft.com/content/6fcd69ab-4dcd-4ffa-ae0f-b9aadfc79e52