



**Response to CAA Consultation on
Review of the 1991 Traffic Distribution
Rules at Heathrow and Gatwick**

Submitted by Northpoint Aviation

on behalf of:

The Regional and Business Airports Group (RABA)

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Executive Summary

RABA (the Regional and Business Airports Group) is the trade body for smaller UK airports serving commercial air transport and business aviation Airports. Amongst our 45 members there a significant number who have a direct interest in the issues raised in the CAP3202 consultation document on TDRs at Heathrow and Gatwick from both the Freight and business aviation sectors.

This response has been prepared to reflect RABA's collective view, which are against any changes to the TDRs and in favour of their extension at the appropriate time to other congested passenger airports where slots are in short supply and should not be offered (with associated grandfather rights) for freight or business aviation operators – we include Stansted and Luton in this list when they are designated slot constrained in peak periods.

As a significant stakeholder, recognised across Government but especially by DfT, with major interest in the CAAs findings because of the way any decision will impact many of our members, we are keen to have the opportunity to raise the issues raised by the consultation, and the details of our response with the CAA and will be a formal request to do so. It is important that as the industry regulator, CAA are seen to engage in dialogue with all parts of the industry, not just a narrow group who might be considered to be directly affected.

1. Introduction

1.1 RABA welcomes the opportunity to respond to the Civil Aviation Authority's (CAA) call for inputs on the review of the Traffic Distribution Rules 1991 (TDRs), as outlined in CAP 3202 (18 December 2025). Our coalition airports represents a diverse group of stakeholders committed to sustainable aviation growth across the UK, including regional airports aspiring to develop freight capabilities (e.g. those in the North, Midlands, Scotland, Wales, and Northern Ireland) and dedicated Business Aviation (BizAv) facilities in the London and South East region (e.g. Farnborough, Biggin Hill, Oxford, and Gloucester Staverton).

1.2 The 1991 TDRs, established under Section 31 of the Airports Act 1986, were carefully designed only to restrict the allocation of slots at Heathrow (LHR) and Gatwick (LGW) to all-cargo (freighter) and BizAv aircraft and then only during peak periods. The aim at the time was to ensure priority for passenger services, which generate significantly higher revenue for the airport (3-5 times more revenue per slot for airports) and value economically, while supporting the development of dedicated and therefore more efficient freight and FBO facilities elsewhere. The context was that even back then Heathrow and Gatwick were busy airports especially in peak periods, which made the negotiation of enhanced international access rights for UK carriers far more problematic than if prime slots were not in short supply.

1.3 It seems to us, that the rationale at that time, which had both industry and Government support, applies equally today; indeed arguably more so, and that alone means the TDRs should not be changed until the slot shortages which drove their imposition are eliminated. There are plenty of other airports in the South East¹ and UK regions² that either already provide for these markets or would actively welcome the opportunity to do so, and to force the reallocation of the UK's critical airport infrastructure when passenger carriers cannot get the slots they need, seems counter-productive.

1.4 RABA therefore strongly advocates for the **retention of the 1991 TDRs** and beyond that their **extension to cover** Stansted (STN) and Luton (LTN) at the appropriate time (i.e. when slot shortages are present in their peak periods). This position is grounded in a strategic, long-term view of UK aviation that prioritizes national economic value, regional equity, environmental sustainability, and self-sufficiency. Retaining and extending the TDRs will:

- Preserve scarce slots at capacity-constrained London airports for high-value passenger operations, encouraging bellyhold freight and reducing reliance on less efficient freighters.
- Mitigate uncertainty around new runway delivery (e.g. Heathrow's third runway being open by 2036 is not guaranteed, and even if it were, slots would need to be released gradually, not simply 'dumped' all at once on the market without any kind of optimisation strategy).
- Promote regional airport development, and in so doing meet the Government's objectively channelling freighter and BizAv demand to underutilized airports with

¹ Bournemouth, Stansted and prospectively Manston for freight, Farnborough, LBHA, Oxford and Brighton City for business aircraft

² Doncaster, Prestwick, Teesside and Cardiff for freighters and Gloucester, Blackpool, Gamston and Manchester City for GA

spare capacity (e.g. EMA, DSA, PIK, BOU, Manston), linked via airline coded Road Feeder Services trucks to maintain Heathrow as a central freight hub leveraging its dense logistics ecosystem.

- Reduce leakage to EU hubs (UK: +400,000 tonnes in 2023 vs. EU's lower internal leakage rates due to single market integration), potentially rising to 1.35 million tonnes by 2050.
- Align with international benchmarks where similar restrictions protect major hubs (e.g., EU's Amsterdam Schiphol and Frankfurt; USA's 'High Density Rule' at JFK/EWR; Canada's airport-specific allocations; Australia's Sydney curfew; Japan's Haneda domestic priority).
- Support GA4Biz strategic priorities, such as embracing fractional operations, addressing night noise for BizAv, and elevating aviation in UK strategic priorities to foster inward investment and mutual license recognition.

1.5 We therefore challenge any adoption of a narrow focus on short-term competition and economic efficiency, which overlooks broader UK plc benefits. Evidence from attached documents (e.g. leakage estimates, Manston forecasts, and academic analysis by Dray et al (2024) on global air freight flows, and other external sources all support our case. For instance, the UK's lower freighter share (25% vs. a global benchmark of 50-60%) reflects efficient bellyhold use, but revoking TDRs could increase inefficiency without addressing leakage. Comparisons with EU, USA, Canada, Australia, and Japan show that protective policies enhance overall system efficiency and resilience.

2. Stakeholder Context

2.1 Our submission draws on expertise from RABA (advocating for smaller airports' viability) and work undertaken jointly with SASIG (who focus on strategic aviation policy for the Local Government Association), the BBGA, Air Charter Association and AOPA examining emerging freight hubs in the North and Midlands, and dedicated BizAv airports in the South East. These entities collectively handle niche operations that complement the London system, such as dedicated freight at emerging hubs such as Manston and Bournemouth and BizAv at specialized facilities at Farnborough, LBHA and Oxford.

2.2 The TDRs were introduced to optimize slot usage at LHR and LGW, preventing lower-yield operations from displacing passenger flights and encouraging off-peak or alternative airport use. This has fostered a balanced UK aviation ecosystem: bellyhold dominates at Heathrow (75% of UK freight), while freighters and BizAv thrive at dedicated or regional sites.

2.3 Aligning with GA4Biz strategic points (e.g. adopting US approaches to light-sport aircraft, embracing fractional operations, addressing night noise for BizAv, and elevating aviation in DfT strategy), retaining TDRs supports dedicated BizAv airports by preventing slot competition at major hubs, enabling growth in fractional models and reducing accumulative taxation burdens on the sector.

3. Arguments for Retaining the 1991 TDRs

Economic Value and Efficiency

3.1 Passenger slots generate 3-5 times more revenue for airports than freighters or BizAv, due to higher landing fees, passenger charges, and ancillary income (e.g., retail). Academic analysis (e.g., Budd and Ison, 2017; Dray et al., 2024) shows bellyhold freight is more cost-efficient, leveraging incremental capacity in passenger aircraft holds. UK freight is disproportionately bellyhold (75% vs. EU average 67%; global OECD 50-60%), reflecting TDRs' success in maximizing value from constrained slots.

3.2 Revoking TDRs risks displacing passenger growth, which drives 66% of UK air freight (CAA data). With LHR at 99% capacity, this could exacerbate congestion, increasing delays and costs. Forecasts generated by in May 2025 for its investors, predict UK freight demand rising 2-3% annually to 2050; but without TDRs, major hubs could prioritize short-term freighter gains over long-term passenger networks.

3.3 Expanding on efficiency: Post-COVID, global freighter use surged (from 56% to over 60% RTKs), but UK's reliance on bellyhold capacity (recovering to 75% by 2023) mitigated disruptions better than freighter-heavy systems (e.g. China's 60% freighter share led to volatility). Retaining TDRs ensures economic resilience, as bellyhold aligns freight with GDP/export growth (average 2.3% GDP CAGR 2000-2019 correlates with 4.2% freight growth pre-2020 – see below).

Table 1: UK Economic Growth Metrics Underpinning Freight Demand (Year-on-Year % Change, 2000-2019) (Source: Historic UK CAGR Freight Growth - GDP and Trade Metrics)

Year	UK GDP (Chained Volume Measure)	UK Exports Value (Current Prices)	UK Imports Value (Current Prices)
2000	3.9	9.1	10.5
2001	2.7	-0.5	1.2
2002	2.4	0.8	3.4
2003	3.9	3.2	3.6
2004	3.1	5.3	6.1
2005	3.1	7.2	5.8
2006	2.5	10.4	8.2
2007	2.4	2.1	0.5
2008	-0.3	0.9	-1.1
2009	-4.2	-9.4	-8.6
2010	1.9	7.4	8.6
2011	1.5	5.4	1.2
2012	1.5	0.6	2.3
2013	2.1	0.5	2.8
2014	3.1	2.7	2.4
2015	2.4	0.5	-0.7
2016	2.2	8.4	9.4
2017	2.1	11.5	9.5
2018	1.3	6.5	6.2
2019	1.6	3.9	3.9

could centralize activity in London, undermining regional aspirations (e.g., SASIG's advocacy for balanced growth) and GA4Biz goals like BVLOS by 2026 for increased business activity.

3.8 *Spare Capacity at Regional Airports and RFS Networks* Regional airports offer ample spare capacity for freight, enabling integration with Heathrow via Road Feeder Services (RFS/airline-coded trucks). This creates a networked system: trucks under airline codes transport cargo to/from Heathrow's dense logistics ecosystem (e.g., 1,387k tonnes handled in 2023, 66% of UK total), while aircraft operate from capacity-rich sites. Key examples:

- **East Midlands (EMA):** UK's top express freight hub, handled 103,000 tonnes May-July 2025 (17.4% YoY growth), with blueprint for 54% demand rise by 2043 (£3.9bn GVA, 12,600 jobs). Added six carriers in 2025; spare stands for Code E aircraft. RFS links to Heathrow could handle 20-30% more without hub slots.
- **Doncaster Sheffield (DSA):** Reopening 2027-2028 (£160m investment), freight from summer 2026. Potential 254,000 tonnes/annum; supply chain opportunities. RFS to Heathrow/South East viable via M1/A1, supporting oil/gas sectors.
- **Glasgow Prestwick (PIK):** Air Freight Business of Year 2025; volumes trebling 2025/26 (21 wide-body freighters/week). Base for Chinese carriers (e.g., Air China Cargo doubled flights). Spare capacity for e-commerce; RFS via M74/M6 to London/SE.
- **Bournemouth (BOU):** Doubled capacity with new facilities (31,000 tonnes to March 2025, 70% YoY growth; 8th in UK). New Code E stands, 3,000m² warehouse. E-commerce focus; RFS via M3/A31 to Heathrow, leveraging proximity.
- **Manston (NSE):** This will have an especially significant role when it re-opens with dual carriageway links from Heathrow via the M25, M26, M2, A249, M2 and A299

3.9 This network preserves Heathrow as a major hub (existing firms, facilities) while utilizing regional spare capacity, reducing congestion and leakage. Manston (projected 1.8MT by 2050) could anchor South East RFS, capturing 40-60% leakage.

3.10 Projections in Table 3, which are based on *trade* CAGR growth of 2.75-3.5%, and GDP growth 1% less than that, show the level of cross channel leakage escalating substantially without intervention, with capturable shares (e.g., 40-60% by Manston or similar) supporting regional hubs. This could add thousands of jobs and billions in GVA, to the UK economy through the adoption of a dispersal strategy that would be undermined by the lifting of the current TDRs; their presence

Table 3: Projected UK Air Freight Leakage (2023-50 MT) (Source: Northpoint)

Year	Total Potential Leakage	Leakage Capturable by MSE with TDRs in place
2023	1,387	918
2025	1,387	918
2027	1,387	918
2029	1,387	918
2031	1,387	918
2033	1,387	918
2035	1,387	918
2037	1,387	918
2039	1,387	918
2041	1,387	918
2043	1,387	918
2045	1,387	918
2047	1,387	918
2049	1,387	918
2050	1,800	918

Uncertainty Associated with the Timing of Capacity Expansion at London System Airports

3.11 New runways at LHR (2036) and LGW (2029) are uncertain due to legal, environmental, and political hurdles (e.g. judicial reviews on climate grounds). Even if built, slots will quickly fill with passenger demand (DfT forecasts 2.3-3% annual growth). TDRs provide a safeguard, preventing premature freighter/BizAv encroachment that could lock in inefficiencies.

3.12 Dray et al. (2024) highlight COVID-induced shifts to freighters (global RTKs 40%+ in 2020-21), but the UK resilience relied on bellyhold; revoking TDRs risks vulnerability should such circumstances happen again, especially with commodity asymmetries (e.g., electronics 35-40% UK flows).

3.13 Uncertainty is also heightened by net-zero commitments; new capacity may face carbon caps, prioritizing passengers. GA4Biz's fuel strategy (e.g., 100LL support) and mutual recognition could mitigate this, but TDRs have the stabilising effect of ensuring balanced growth.

Environmental and Community Impacts

3.14 Freighters sometimes require night slots, exacerbating noise (e.g., QC ratings at LHR/LGW). TDRs minimize this by channelling them to quieter sites (e.g. EMA and Stansted both of whom have night operations). BizAv adds to congestion without proportional benefits. Retention aligns with net-zero goals, as bellyhold reduces the need for dedicated cargo flights (e.g., Dray et al., 2024 notes freighters' higher emissions per tonne-km; UK freighter share rose temporarily in 2020-21 but bellyhold efficiency prevailed).

3.15 Aviation contributes 2% to global CO₂ (IPCC, 2014), but air freight's share rose 25% since 2019. Freighters emit more per tonne than bellyhold, as emissions are not shared with passengers (UNIS, 2024; AEF report: bellyhold allocates ~10-20% emissions to freight vs. 100% for freighters). TNO (2020) shows unnecessary freighter movements add CO₂; unfair calculations (Air Cargo News, 2025) favour freighters by ignoring passenger allocation, potentially understating bellyhold's green edge.

3.16 Noise pollution: Freighters generate significant noise, impacting communities (AGI, 2024); IPCC notes contrails from high-altitude flights amplify warming (up to 3x CO₂ effect). Air quality degradation near airports (e.g., NO_x, particulates) is higher with freighters. TDRs promote bellyhold, reducing overall flights/emissions; regional shifts (e.g., via RFS) cut road miles but lower aerial impacts.

3.17 Community impacts are acute in dense areas; international comparisons (e.g., FRA's curfew) show restrictions lower noise complaints by 20-30%. Aligning with GA4Biz, addressing night noise for BizAv and fuel strategies (e.g., 100LL support) ensures dedicated airports can operate without major hub conflicts. Sustainable fuels (GA4Biz priority) could mitigate, but TDRs accelerate transition by favouring efficient modes.

National Self-Sufficiency and Resilience

3.18 Post-Brexit and COVID, UK aviation must prioritize resilience. Leakage to EU hubs (e.g., 27% via London Gateway; Derivation of Leakage Estimates, 2025) risks dependency. TDRs foster domestic capacity, reducing vulnerability (e.g., during 2021-22 disruptions, UK freighter share rose to 60% but bellyhold proved resilient per Dray et al., 2024). GA4Biz points like EGNOS access and bilateral agreements enhance self-sufficiency.

3.19 Resilience is key amid global shifts; Dray et al. (2024) notes UK's freight elasticity to GDP (1.6x) requires protected hubs to avoid trade frictions. Self-sufficiency counters EU leakage, supporting inward investment (GA4Biz goal).

Arguments for Enhancing TDRs to Include Stansted and Luton

3.20 STN and LTN face growing constraints (e.g., STN at 50 million passengers/year cap). Extending TDRs would:

- Prevent slot hoarding by freighters/BizAv, preserving passenger growth.
- Align with London system strategy (e.g., Davies Commission emphasized coordinated capacity).
- Support dedicated alternatives (e.g., Manston for freight, projected 1.8MT by 2050; Biggin Hill for BizAv).

3.21 Enhancement addresses STN's integrator growth (e.g., UPS, FedEx), ensuring bellyhold priority amid 4-5% CAGR projections.

4. Benchmarking: International Examples and Comparisons

4.1 Similar rules exist globally to protect hubs, with variations reflecting market structures. We compare EU (integrated, regulated), USA (deregulated, market-driven), Canada (decentralized), Australia (curfew-focused), and Japan (domestic-priority).

- **EU (e.g., Amsterdam Schiphol (AMS), Frankfurt (FRA)):** Strict noise quotas and curfews prioritize passengers; freighters diverted to dedicated hubs (e.g., Liege for AMS). EU policy (EC 95/93) mandates transparent slot allocation, but national rules allow discrimination (e.g., FRA's 2300-0500 curfew fines €50,000). Freighter share 33%, bellyhold dominant at hubs. Compared to UK, EU's approach is similar but more fragmented; TDRs align, reducing leakage (e.g., Germany's 4.6MT tonnage vs. UK's 1.6MT, per Summary of Air Cargo Market).
- **USA:** FAA's High Density Rule (14 CFR 93) at congested airports (e.g., JFK, EWR) allocates slots via "use-or-lose" (80% utilization), with international slots separate (93.217). No explicit freighter discrimination, but IATA urges fair access (2025 calls). Dedicated hubs (e.g., Memphis for FedEx, 50% freighter share) handle cargo off-main hubs. USA's deregulated market (freighter 50%) contrasts UK's 25%, but rules protect passenger efficiency at majors. TDRs could emulate USA's balance, preventing hoarding while supporting regions.
- **Canada:** Transport Canada's slot management at Level 3 airports (e.g., Toronto Pearson YYZ, Vancouver YVR) uses IATA guidelines with "use-or-lose" rules (80% utilization), but freighters face de facto restrictions via priority for passengers and international agreements. Dedicated cargo airports like Hamilton (YHM) handle integrators (e.g., Cargojet, DHL), with freighter share ~45%. Canada's decentralized policy (provincial input) emphasizes regional equity, mirroring UK TDRs by diverting freight to avoid hub congestion. Unlike UK's explicit rules, Canada's is more flexible but achieves similar outcomes, reducing noise and supporting bellyhold (55% of freight).
- **Australia:** Department of Infrastructure's Sydney Airport Demand Management Act (1997) enforces a curfew (2300-0600) and 80 movements/hour cap, with slots allocated via Slot Management Scheme prioritizing passengers; freighters limited to exemptions or off-peak. National Aviation Policy (2023 White Paper) promotes dedicated cargo at secondary airports (e.g., Melbourne's Avalon for freight). Freighter share 55%, higher due to geography, but rules protect hubs like SYD. Australia's environmental focus overrides short-term efficiency, similar to TDRs, fostering regional hubs and reducing emissions.
- **Japan:** MLIT's slot allocation at Haneda (HND) prioritizes domestic/international passengers under Aviation Law (Article 47), with freighters restricted to <10% slots; Narita (NRT) handles most cargo with separate zones. Noise curfews (2300-0600 at HND) and "use-or-lose" (85%) ensure efficiency. Freighter share 45%, bellyhold dominant at hubs. Japan's policy, like UK's, protects major metros while supporting dedicated facilities (e.g., Chubu for cargo), emphasizing resilience post-disasters.

4.2 These comparisons highlight that protective policies (e.g., EU/Canada's regulations, USA/Australia's market-environmental balance, Japan's priority system) enhance system-wide efficiency, reduce externalities, and promote specialization—benefits TDRs deliver for the UK. Revoking them would diverge from global best practices, risking inefficiency seen in less regulated markets (e.g., USA's higher freighter volatility during COVID).

5. Rebuttal of Anti TDR Advocate Views: Competitiveness and Economic Efficiency

5.1 The CAA may argue revocation enhances competitiveness (more operators, lower prices) and efficiency (market-driven slot use). However:

- **Competitiveness:** Revoking TDRs could increase short-term competition but lead to inefficiency. Freighters displace high-yield passengers, reducing connectivity (Dray et al., 2024 notes UK's low freighter share optimizes networks). Leakage persists (384k tonnes in 2023), eroding UK competitiveness vs. EU hubs (e.g., Germany's 4.6MT tonnage vs. UK's 1.6MT, driven by protected hubs like FRA). Override with strategic considerations: regional balance creates resilient, distributed networks, aligning with GA4Biz's inward investment goals. International benchmarks (e.g., CDG's restrictions haven't hindered Air France's competitiveness; Japan's HND policy supports ANA/JAL dominance) show protected hubs thrive. In contrast, USA's open market leads to freighter concentration (e.g., Memphis), but at the cost of hub congestion elsewhere.
- **Economic Efficiency:** Short-term metrics ignore externalities. Bellyhold is more efficient (30-40% load factors vs. freighters' 50-80%, but incremental costs lower; Dray et al., 2024). Revocation risks opportunity costs (e.g., £2.2trn global aviation impact; ATAG, 2024). Override with long-term UK plc value: reducing leakage (projected 1.35MT by 2050) adds £ billions in GDP/jobs. GA4Biz points like accumulative taxation (e.g., APD 50% hike) amplify inefficiencies without TDRs. Environmental costs (higher freighter emissions) and regional equity outweigh short-term gains. Compared to EU's regulated efficiency (e.g., AMS's quotas optimize bellyhold), Canada's decentralized approach balances costs; Australia's curfews reduce noise externalities (saving ~AUD 100m annually in complaints/health). Japan's system ensures high load factors (85%+), proving intervention enhances efficiency over pure markets.

5.2 CAA should adopt a holistic view under s34 AA86, considering UK obligations (e.g., net-zero) and relations (e.g., post-Brexit trade resilience). Narrow efficiency arguments fail against broader evidence, as seen in Dray et al. (2024): UK's bellyhold focus post-COVID improved resilience vs. freighter-heavy peers.

6. Conclusion and Recommendations

6.1 RABA and SASIG believe that retention the 1991 TDRs is required and should be extended to other congested airports if UK's strategic aviation future is to be safeguarded. This is because the impact will be to ensure high-value slot use, encourage increased use of regional airports and associated local economic activity, and build resilience. It will also align the UK with global practices which have prioritize passengers while supporting dedicated freight/BizAv facilities in a reliever role.

6.2 In short, we consider our analysis demonstrates:

- *Economic Value:* Passenger slots generate 3-5x more revenue; UK's 75% bellyhold share optimizes capacity use
- *Regional Development:* TDRs support balanced growth, with spare capacity at EMA, DSA, PIK, BOU and MSE integrated via RFS networks
- *Leakage Reduction:* Protecting major hubs while developing regional alternatives can recapture £10-16bn annually by 2050
- *Environmental Sustainability:* Bellyhold reduces dedicated flights and emissions per tonne
- *International Alignment:* USA, EU, Canada, Australia, Japan all employ similar hub protection policies
- *Policy Flexibility:* Enhancement to include STN/LTN addresses growing constraints across London system

6.3 RABA therefore strongly recommends the CAA advise the Secretary of State to:

- a. Retain the 1991 TDRs in their current form for Heathrow and Gatwick
- b. Enhance the TDRs to include Stansted and Luton airports, with appropriate consultation on implementation timelines
- c. Work with DfT and regional stakeholders to develop integrated freight strategies leveraging RFS networks
- d. Monitor international developments (particularly EU environmental restrictions) to ensure UK policy remains aligned with best practices
- e. Conduct periodic reviews (every 5 years) to assess TDR effectiveness against evolving market conditions and capacity developments

6.4 We are available for further discussion and evidence provision if required as the CAA develops its draft advice for the March 2026 consultation.

Appendix: Sources Used to Develop the Submission

This appendix lists key sources, including attached documents and external references online.

Reference Documents

- CAP 3202: Call for Inputs – Review of the Traffic Distribution Rules 1991 (CAA, 18 December 2025) – Basis for the consultation response.
- Historic UK CAGR Freight Growth - GDP and Trade Metrics (PDF, 4 pages) – Data for Table 1 on UK economic metrics.
- Dray et al. (2024): Global air freight flow data for aviation policy modelling (Journal of Air Transport Management, Volume 121) – Insights on freight flows, emissions, and efficiency.
- GA4Biz potential strategic points for UK Government 2025 Rev 1.docx – Strategic alignment with GA4Biz priorities.
- Summary of Air Cargo Market and Economic Relationships in European Countries.docx – EU/UK tonnage comparisons.
- Why does the UK have a much lower percentage of air cargo flown on dedicated freighter aircraft...docx – Freighter vs. bellyhold shares.
- Characteristics of the Air Cargo Market in Europe and the UK's Position in it..docx – Market structure and forecasts.
- Derivation of Leakage Estimates for UK Air Freight Using Cross Channel Airports in Nr Europe copy 2.docx – Leakage methodology.
- Extrapolation of Leakage Data v7.xlsx – Data for Tables 2 and 3.
- Manston Forecasting and Commercial Segmentation Strategies - MAY 2025 (V2).docx .
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- The role of dedicated freighter aircraft in the provision of global airfreight services.docx (Budd and Ison, 2017) – Freighter analysis.
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- Analysis of the air cargo transport network using a complex network theory perspective copy.docx (Bombelli et al. 2020) – Network analysis.
- Freight forwarder satisfaction, airport customer loyalty, and competitiveness copy.docx (Almofeez et al. 2024) – Forwarder satisfaction.
- The effects of new international airports and airfreight integrator's hubs on the mobility of cities in urban hierarchies copy.docx (Matsumoto and Domae, 2018) – Hub effects.

Online Sources Examined

- IPCC Special Report: Aviation and the Global Atmosphere** (IPCC, 1999) – Aviation CO2 projections.
- Comparison of Carbon Dioxide Emissions from Different...** (IPCC Archive, 1999) – Aviation CO2 share.
- Reducing emissions from aviation** (EU Climate Action, 2022) – Aviation CO2 contribution.
- Unfair cargo emissions calculations favouring freighters over bellyhold** (Air Cargo News, Nov 5, 2025) – Emissions calculations.
- Belly Cargo vs Carbon Emissions: A Comparison** (UNIS, undated) – Bellyhold efficiency.
- Belly freight shouldering airlines' CO2 emissions burden: forwarders** (JOC, Nov 6, 2025) – Emissions burden.
- Aviation Noise Impacts: State of the Science** (PMC, 2017) – Noise health impacts.
- Noise and air pollution – the real community impacts of airport...** (AEF, Dec 19, 2025) – Community impacts.
- The effects of air and transportation noise pollution-related altered...** (ScienceDirect, Nov 15, 2024) – Noise and air pollution effects.
- Health impacts of exposure to noise from transport in Europe** (EEA, Oct 6, 2025) – Transport noise impacts.
- Carbon leakage in the aviation sector: Is it a problem and if... | T&E** (T&E, Oct 6, 2025) – Carbon leakage.
- UK Emissions Trading Scheme: Impact of end of aviation free...** (UK Gov, Oct 28, 2025) – Carbon leakage policy.
- East Midlands Airport strengthens its cargo lead with new operators...** (Air Cargo Week, Aug 18, 2025) – EMA cargo growth.
- East Midlands Airport unveils plans to 'unlock full cargo potential'** (CAAS Int, May 21, 2025) – EMA blueprint.