From: Jill Sutcliffe
Sent: 19 August 2024 08:28
To: Gatwick Airport
Subject: Contribution

Hello, I have been endeavouring to access the Gatwick site to make some comments before August 21st but the website has been unusable since before the weekend.

Name: Jill Sutcliffe, Dr

[redacted]

It will probably be obvious from my address. I live under one of the current flightpaths. Perhaps one of the few advantages of the Pandemic, and certainly true for us, was the lack of aircraft overhead. In an age which should be dominated by addressing the climate crisis, there are issues confronting air transport which need to be addressed. The application needed to tackle noise, the small area of airspace which is being challenged by EasyJet and british Airways RR and which needs to be modernised in view of the prediction of 100,000 extra flights and a factor which should have been included in the application.

Airspace as proposed by Easy jet and British Airways

While airlines state that they want to cut carbon emissions there have been issues; Air traffic control. On August 17th the *Guardia*n contained a report by Gwyn Topham in their business section titled "*One European sky*" Could a single airspace cut CO_2 and solve air traffic woes. In 2023, a glitch in the UK's national Air Traffic Servies (NATS) system grounded planes and the associated bill fell at the airlines' doors. A further annoyance for the airlines was the supposed inefficiency of a system that runs European airspace which is based on the land borders far below.

Tui's Chief Executive told the BBC that the co could avoid 10% of emissions if there was an "effective flight organisation" over Europe." One airspace would allow places to fly straighter routes; instead there is an invisible patchwork of sovereign skies under the control of myriad national operators".

in the US, Canada and Australis these are enormous areas with one air traffic control agency. this compares with 43 in Europe! Improved coordination foundered on the traditional nationalistic lines.

Aircraft Noise

I support a reduction annually in the noise envelope as proposed by PINAS at ISH9 I live under the flight path which has increasingly been getting noisier. There needs to be a night ban and householders/residents need to be compensated if this application goes ahead. Communities living under the flightpath need surely to be compensated and clearly if the result of this DCO is an extra 100,000 flights overhead!! Impacts and issues such as

dealing with the additional increase in wastes. smells and lack of housing and infrastructure in the area would need to be addressed if the DCO is permitted/agreed.

Air Quality

Policy: This application does not conform with policy as stated within the *Beyond the Horizons – Making best Use of Existing Runways*"

many thanks for your consideration.
Best Wishes,
Jill
Jill Sutcliffe, Dr, environmental scientist

From: Jill Sutcliffe
Sent: Wednesday, August 14, 2024 2:13 PM
To: NI Enquiries

Envirotec
TECHNOLOGY IN THE ENVIRONMENT

Contrails study adds to aviation climate-impact fears

August, 2024

Modern commercial aircraft flying at high altitudes create longer-lived planet-warming contrails than older aircraft, according to a new study by researchers at Imperial College London.

The results, according to the group, mean that although modern planes emit less carbon than older aircraft, they may be contributing more to climate change through contrails.

Private jets produce more contrails than previously thought, according to the findings, potentially leading to outsized impacts on climate warming.

Contrails, or condensation trails, are thin streaks of cloud created by aircraft exhaust fumes.

While the exact warming effect of contrails is uncertain, many scientists believe it is greater than the warming caused by carbon emissions from jet fuel.

Published on 7 August in *Environmental Research Letters*, the study used machine learning to analyse satellite data on more than 64,000 contrails from a range of aircraft flying over the North Atlantic Ocean.

Modern aircraft that fly at above 38,000 feet (about 12km), such as the Airbus A350 and Boeing 787 Airliners, create more contrails than older passenger-carrying commercial aircraft, the study found.

To reduce jet fuel consumption, modern aircraft are designed to fly at higher altitudes where the air is thinner with less aerodynamic drag, compared to older commercial aircraft, which usually fly at slightly lower altitudes (around 35,000ft/11km).

This means these higher-flying aircraft create less carbon emissions per passenger. However, it also means they create contrails that take longer to dissipate – creating a warming effect for longer and a complicated trade-off for the aviation industry.

Double whammy of warming?

Dr Edward Gryspeerdt, the lead author of the study and a Royal Society University Research Fellow at the Grantham Institute – Climate Change and the Environment, said: "It's common knowledge that flying is not good for the climate. However, most people do not appreciate that contrails and jet fuel carbon emissions cause a double whammy warming of the climate.

"This study throws a spanner in the works for the aviation industry. Newer aircraft are flying higher and higher in the atmosphere to increase fuel efficiency and reduce carbon emissions.

"The unintended consequence of this is that these aircraft flying over the North Atlantic are now creating more, longer-lived, contrails, trapping additional heat in the atmosphere and increasing the climate impact of aviation.

"This doesn't mean that more efficient aircraft are a bad thing – far from it, as they have lower carbon emissions per passenger-mile. However, our finding reflects the challenges the aviation industry faces when reducing its climate impact."

The study did confirm a simple step that can be taken to shorten the lifetime of contrails: reduce the amount of soot emitted from aircraft engines, produced when fuel burns inefficiently.

Modern aircraft engines are designed to be cleaner, typically emit fewer soot particles, which cuts down the lifetime of contrails.

While other studies using models have predicted this phenomenon, the study published today is the first to confirm it using real-world observations.

Co-author Dr Marc Stettler, a Reader in Transport and the Environment at the Department of Civil and Environmental Engineering, Imperial College London, said: "From other studies, we know that the number of soot particles in aircraft exhaust plays a key role in the properties of newly formed contrails. We suspected that this would also affect how long contrails live for.

"Our study provides the first evidence that emitting fewer soot particles results in contrails that fall out of the sky faster compared to contrails formed on more numerous soot particles from older, dirtier engines."

Private jets: the worst offenders?

Even higher in the sky, the researchers found that private jets create contrails more often than previously thought – adding to concerns about the excessive use of these aircraft by the super-rich.

Despite being smaller and using less fuel, private jets create similar contrails to much larger commercial aircraft, the analysis found, which surprised the researchers.

Private jets fly higher than other planes, more than 40,000 feet above earth where there is less air traffic. However, like modern commercial aircraft creating more contrails compared to lower-flying older commercial aircraft, the high altitudes flown by private jets means they create outsized contrails.

Dr Gryspeerdt said: "Despite their smaller size, private jets create contrails as often as much larger aircraft. We already know that these aircraft create a huge amount of carbon emissions per passenger so the super-rich can fly in comfort.

"Our finding adds to concerns about the climate impact caused by private jets as poor countries continue to get battered by extreme weather events."