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Contraails

Newsletter of the
Christchurch Aviation Society
CAvSoc

The National Air Traffic Service (NATS)

Luke Law, Senior Manager in Corporate Affairs at NATS, stepped in at short notice when our original speaker was not available. Luke opened by introducing ATC100, the event that celebrates 100 years since Air Traffic Control services was started at Croydon in 1920. Now we see NATS as the UK's leading provider of air traffic control services handling 2.4 million flights and 250 million passengers within UK airspace. In addition to providing the visible services in control towers at 14 UK airports, NATS manages all upper airspace in the UK as well as provision of related services to 30 nations around the world. An essential element is that military and civilian air traffic operators sit side by side to provide an integrated service in the UK's crowded airspace.

With a turnover approaching £900m and nearly 4,500 people NATS is a private company, albeit a monopoly provider, with a government share of 49% and an airport group of 8 major companies holding 42%, Heathrow 4% and 5% by employees. Air traffic controllers comprise 40%, air traffic service assistants 15% with the remainder being engineers and other specialists. The regulatory framework is provided by the CAA and the EC.

UK airspace is divided into 3 Flight Information Regions namely London, Scottish and Shanwick Oceanic with an area over Southern Ireland controlled by the Irish Aviation authority. As the name implies Shanwick is co-ordinated between Shannon (Aeradio) and Prestwick Centre. The latter handles an average of 3,500 flights a day with Swanwick Centre averaging 6,300 equating to 2.58 million flights and more than 260 million passengers in 2019. Nearby in Whiteley is a headquarters centre with training, engineering and support functions. *(The editor noted that Swanwick is adjacent to a sailing centre and Whiteley to a golf centre – just saying).* Whiteley is also the base for Aquila, a MOD project to operate and upgrade military air traffic manage-

ment. NATS is also in a joint venture (FerroNATS) with Ferrovial of Spain to provide air traffic services in towers across Spain.



Luke explained how aircraft separation is maintained and how airways are divided into sectors with specific borders and sizes divide up the seemingly impossible task into manageable 'chunks'. A busy sector adjacent to an airport will have a smaller area further out. Vertical separation is set at 1,000 feet and horizontal separation between 3 and 5 miles

(dependent on the airspace they are flying in). Where radar coverage across the Atlantic is reduced, separation is maintained by allocating 30 mile wide tracks (prior to 2015 it was 60 mile wide) and in longitudinal separation of 40nm or 10mins. The latitudinal position of the tracks changes to take advantage of the prevailing traffic flow (typically west ward during daylight) and wind direction so that aircraft can make use of the jetstream to save fuel

(or to avoid it). Additionally, in 2019, satellite based surveillance enable closer management which further increased efficiency and traffic capability

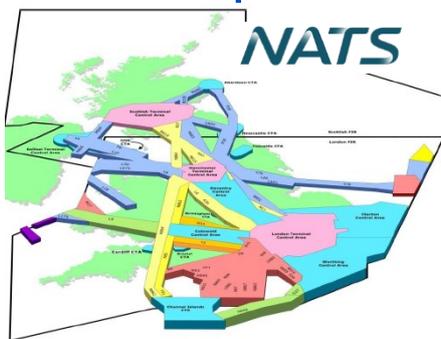
A significant amount of work is being spent on the Airspace Modernisation Strategy. This will take advantage of satellite navigation systems to reduce the controllers vectoring work load, to reduce holding stacks and to improve routing and climbing patterns. In this way NATS has a large part to play in

reducing fuel wastage. It is estimated that since 2008 proactive airspace management has saved 8.4 million tons of CO2 in the atmosphere and improving techniques should manage another 7% improvement by 2050.

The talk gave us a fascinating insight into what is rarely seen, with some engaging videos of air traffic in 24hours which showed the east west and Europe flows.

George Errington—Airspeed Test Pilot

Because the AGM has been cancelled books can be ordered direct from Mike Phipp by sending a cheque for £15 to him at 14 Goldfinch Road, Poole, BH17 1TD. Don't forget to include your address. This is a special discount from the full price of £16.99.



Meeting dates

Wednesday 06May20 Cancelled
AGM, then 'Nevil Shute' by Stephen Robson
Normal service will resume as soon as possible.