

AIR TRAFFIC CONTROL STAFFING IN THE UK



April 2024
An RAeS ATM Specialist Group
Briefing Note No 2

AIR TRAFFIC CONTROL STAFFING IN THE UK

ISSUE

- ATC staff shortages that may cause airline delays and cancellations are the subject of considerable industry and media commentary, but the staffing risk is not widely understood.

BACKGROUND

- UK ATC services are provided by Air Navigation Service Providers (ANSPs) licensed by the CAA. ATCO working hours limitations are prescribed by the CAA under the Scheme for the Regulation of ATCO Hours (CAP 670 – SRATCOH) in addition, Working Practices Agreements (WPs) with Trades Unions (TUs) further impact on availability. An ATC unit must determine its own Operational Requirement (OR) for staff based on a range of factors, including operating hours, the number of operational positions, ATC equipment technical capability, and ATC demand (the number of aircraft requiring a service). ATCOs normally work a shift pattern to cover H24/365 operations. The CAA agrees the OR under its safety regulation role but does not set it.
- UK airspace is a national asset and is categorised into various classifications according to its usage. Broadly speaking, mandatory ATC instructions are issued in segregated airspace where commercial flying takes place (in corridors or around airports). In some lower airspace divisions ATC services are not mandated. Military and civil operations take place across all UK airspace classifications in a Joint and Integrated environment.
- Some form of ATC is normally provided at airports and aerodromes where commercial passenger operations take place. Such services range from the provision of Flight Information Services for low volume operations, to tower and approach services for more complex operations.
- ATC services to aircraft operating in UK airspace are also provided from two (upper airspace) area radar units run by NATS at Prestwick and Swanwick. Aircraft operating in the London Terminal Manoeuvring Area (LTMA) are provided services from Swanwick Terminal Control (TC). The MoD also delivers ATC across the UK to military aircraft reflecting the joint and integrated arrangements within UK airspace.

WHO PAYS FOR ATC?

- Airport authorities are responsible for providing ATC at airports. This is either self-supply, where the authority is also an ANSP, or it is provided by an ATC specialist contractor. By way of examples, Newcastle is self-supply and Gatwick contracts NATS.
- A regional airport would normally provide tower services (to aircraft on final approach, aircraft on the ground, and aircraft within about two miles of the aerodrome) from the Visual Control Room (VCR), and a radar service from an operations room within the control tower building to aircraft within about thirty miles. It is highly desirable that ATCOs at such units are qualified to work in both tower and approach functions. The OR here would be in the order of 25 ATCOs.
- The five major London airports provide tower-only services because the approach function is delivered by Swanwick Terminal Control. Tower-only staffing would normally require a lower OR than a regional airport because the approach function is delivered from Swanwick, but high traffic demand will require more tower positions to be filled for longer periods which in turn drives up the OR. The five major London airports that have approach services provided by Swanwick TC do not pay for this service. Rather it is charged to airlines via en route charges.
- En route services provided by NATS NERL from Swanwick and Prestwick are paid for via en route charges by airline users.

- At Swanwick and Prestwick, ATCOs today work a five-watch system as each unit operates H24 every day of the year. Controllers are trained and qualified on specific airspace sectors – such qualifications are known as validations. They are normally expected to hold more than one validation to meet a minimum unit requirement. At Swanwick, ATCOs operate in either Area Control (AC) or Terminal Control (TC) except at a supervisory level where they may operate in both. While there are several hundred ATCOs fulfilling the en route functions, it is important to understand that they operate in multiple small teams. This means that, in Swanwick TC, a Luton approach controller may be valid on Stansted approach and provide a level of flexibility in the event of staff sickness on Stansted approach but he/she may not be valid on Gatwick approach. Staff sickness on an approach function can also be backfilled with overtime shifts subject to SRATCOH and WP agreements.
- **Key Point 1** – Where ANSPs have small ATC teams there is an increased likelihood that staff sickness will have an operational impact because the remaining team will have less flexibility to cover mandated rest breaks or provide an overtime shift.
- **Key Point 2** – Tight commercial contracts lead to minimal staffing which, in turn, increases the operational impact of staff sickness.
- **Key Point 3** – NERL is subject to economic regulation by the CAA and agrees a settlement every five years following consultation with airlines. The staffing risk is included in consultation briefings.
- **Key Point 4** – If staff sickness absence cannot be filled with an overtime shift (there are SRATCOH and WP limits on this) then a control position may need to be closed for a period which could lead to a delay-inducing traffic flow restriction.
- **Key Point 5** – Traffic flow may have to be restricted to prevent ATCO overload. This is a mandatory safety requirement.

REQUIREMENTS FOR AN ATC CAREER

- ATCOs are trained by licensed training organisations. ATCOs usually train for a specific career path, broadly airport or area functions. NATS has a substantial training college at Whiteley near Swanwick. Once college training is completed, ATCOs join an ATC unit and conduct On the Job Training (OJT) before achieving their validation(s). Training methodology has improved in recent years with the advent of capable simulators and improved training techniques, but ATCOs are still required to train in a live environment where the operational tempo cannot be adjusted to suit a particular stage of training. Thus, the initial period of OJT can be quite daunting. Despite investments in recruiting and training, it can take up to three years from commencing training to qualifying at a complex unit. There is a clear trade-off between greater investment in training and the eventual pass rate of a student ATCO. In general, due to the already high level of costs to train, the industry is moving towards increased simulator time for students (either with an instructor or self-learning) as this has shown to produce better success rates and, therefore, be cost beneficial.
- Once qualified, ATC standards are maintained using a CAA-approved competence scheme. Here experienced ATCO peers support their colleagues through prescribed routine checks. Additional professional training is routinely provided throughout an ATCO's career.
- A career in ATC is regarded as rewarding, but current trends have shown that younger employees no longer see it as a job for life. This trend combines with changing social, economic and personal factors to make retention an increasing concern.
- It is not currently possible for any ATCO trained outside the UK, or UK military licensed ATCOs, to work in the UK without completing the entire basic training from scratch regardless of their previous experience. However, UK licensed controllers may work elsewhere, including in Europe, without the same constraints.
- While the focus of this brief is on ATCO staffing, there are many other roles in ATC that are safety and service critical.
- **Key point 6** – Recruitment and training of ATCOs can take up to three years. Reducing headcount in reaction to a downturn in traffic (eg during Covid) has long term consequences which can be difficult to recover from.
- **Key Point 7** – Airlines and airports react more quickly than ATC to demand fluctuations because, during a downturn, the cost of exiting staff is lower than in ATC and, during a recovery, a substantial proportion of the workforce does not require protracted training.
- **Key Point 8** – Constraints on UK ANSPs recruiting from abroad, or from the military, present a unique risk to the UK aviation industry.

CHANGES TO ATC

- Over recent years changes to the ATC system have reduced both the cost of staffing and the associated risks. Technology changes at airports and area centres have reduced controller and support staff workload and delivered concomitant safety benefits. Procedural changes, spearheaded by NATS airports, have reduced staffing needs when demand is low by 50%. Airspace changes allow for greater throughput which increases controller capacity. Investments in people are not confined to additional professional training. Rather they are focused on resilience and wellbeing to reduce the impact of stress. In addition, the industry is striving for ever-greater efficiency in the usage of ATCOs (an extremely costly resource). Future social dialogue with trade unions should ideally be focused on this efficiency.
- **Key point 9** – Successful technology implementations reap long-term cost-reduction rewards.
- **Key point 10** – In a well-established safety regime, it can be challenging to do things differently, but procedural and rostering changes can be hugely beneficial. Such changes require CAA and TU support.
- **Key point 11** – Implementing airspace change projects can be challenging. However, the rewards can be substantial and include staffing risk reductions.
- **Key point 12** – The cost of investing in people is offset by improved attendance rates.

ATC INDUSTRIAL RELATIONS

- ATCO TU membership is high, with Prospect (ATCOs Branch) holding by far the most members. Across the UK, working relationships between TUs and industry management have been sufficiently satisfactory in recent years to avoid major disputes. Nonetheless, maintaining this relationship takes considerable effort on both sides. This is a worthwhile investment as industrial action by ATCOs would have a costly impact across the aviation industry.
- **Key point 13** – Investing in relationships between TUs and industry managers is critical to service resilience.

KEY POINTS SUMMARY

- Where ANSPs have small ATC teams there is an increased likelihood that staff sickness will have an operational impact because the remaining team will have less flexibility to cover mandated rest breaks or provide an overtime shift.
- Tight commercial contracts lead to minimal staffing which in turn increases the operational impact of staff sickness.
- NERL is subject to economic regulation by the CAA and agrees a settlement every five years following consultation with airlines. The staffing risk is included in consultation briefings.
- If absence through staff sickness cannot be filled with an overtime shift (there are SRATCOH and WP limits on this) then a control position may need to be closed for a period which could lead to a delay-inducing traffic flow restriction.
- Traffic flow may have to be restricted to prevent ATCO overload. This is a mandatory safety requirement.
- Recruitment and training can take up to three years. Reducing headcount in reaction to a downturn in traffic (eg during Covid) has long term consequences.
- Airlines and airports react more quickly than ATC to demand fluctuations.
- Constraints on UK ANSPs recruiting from abroad, or from the military, present a unique risk to the UK aviation industry.
- Successful technology implementations reap long-term cost reduction rewards.
- In a well-established safety regime, it can be challenging to do things differently, but procedural and rostering changes can be hugely beneficial. Such changes require CAA and TU support.
- Airspace change projects are extremely difficult to implement. However, the rewards can be substantial and include staffing risk reductions.
- The cost of investing in people is offset by improved attendance rates.
- Investing in relationships between TUs and industry managers is critical to service resilience.

RECOMMENDATIONS

The ATMSG recommends that the contents of this report be used:

- To inform ministers and government officials of our perspective on ATC workforce issues.
- To highlight the fact that it is not currently possible for any ATCO trained outside the UK, or UK military licensed ATCOs, to work in the UK without completing the entire basic training from scratch regardless of their previous experience despite the fact that UK licensed controllers may work elsewhere, including in Europe, without the same constraints.
- Used by the Society to respond to requests for information.
- To challenge current thinking on OJT processes and to emphasise the benefits from the increased use of simulation in the ATCO training process.

RAeS Air Traffic Management Specialist Group – April 2024

NOTES

- This brief is focussed on the UK picture, but staffing constraints presents risks across Europe and extend to the US and Canada.
- Segregated airspace is allocated for the exclusive use of specific users. For example, this would normally refer to the Class A airspace where commercial operations take place and ATC instructions are mandatory. It may also refer to danger areas allocated for military usage. In both cases aircraft, not normally requiring segregated operations, may be permitted entry with appropriate permissions.
- Tower services are normally delivered from the visual control room (the glass structure on top of a tower) to aircraft within the vicinity of the aerodrome or on the ground at that aerodrome.
- Approach services refers to a phase of flight and are normally delivered using radar. Non-radar procedural approach services are also possible.
- LTMA is airspace over and around London where additional rules to apply to allow for safe operations in and out of London airports.
- Main London airports: Heathrow, Gatwick, Stansted, Luton and London City.
- A route charge is levied for each flight – this pays for NERL services.

CONTACT

The Royal Aeronautical Society (RAeS) welcomes and encourages further engagement on this topic. Please direct all correspondence to the RAeS Committee via the contact details below:

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