PE1804/CC
Petitioner submission of 1 December 2020

During the evidence session with the Committee, I offered to provide more information regarding the HELIOS Air Traffic Management 2030 Scoping Study, commissioned by HIAL, that we referenced.

The Helios Scoping Study is 243 pages long, so I will focus on the major weaknesses as I see them.

Surveillance

Surveillance in this context is the use of a sensor or sensors to show an aircraft in flight on a display screen.

Primary Radar bounces radio waves off an aircraft in flight which are reflected back, allowing a range and bearing to be determined. It will show any aircraft in its area and does not rely on the aircraft having a transponder.

Secondary radar emits a signal that interrogates a device on the aircraft called a transponder. The transponder then sends information back, giving the aircraft´s call-sign, altitude, etc.

The Helios Executive Summary discounts Primary and Secondary radars as cost prohibitive. (Inverness radar cost £4.6m. HIAL/Dundee Airport Ltd will need 3 further radar systems, adding an extra £13.8m). The use of novel, cheaper technologies is recommended. However, these novel technologies are not used by UK aerodromes, so unlikely to gain CAA approval. This was glossed over in the Executive Summary.

The main body of the Helios study reveals that CAA policy is Primary Surveillance Radar is needed, ensuring that aircraft without transponders can be detected.

Primary Radar is the CAA requirement for surveillance[1]. The Helios suggestion is not. Had this been made clearer, the HIAL Board would have been better informed about costs and risks, allowing more informed and perhaps different decisions to be reached.

My colleagues and I pointed out the CAA requirements, our views were dismissed.

HIAL now admit that Primary Radar is necessary. No public mention has been made of the significant increase in costs and difficulty this brings to the ATMS project.

Communications links for Remote Towers and Radar.

The Helios Executive Summary, says that the availability of communications was identified early as a particular issue, yet say they are reassured that solutions do exist.
I believe that this glosses over the major risk to the ATMS project.

Communication links are critically important when using remote towers, (and Primary Radar). Helios seems to have exercised a `light touch´ when investigating them.

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[1] CAP 670, Part C, Section 3, Surveillance

The National Air Traffic Services project to install a remote tower at London City and provide Air Traffic Control from Swanwick was known about at the time of the study. Communications links from London City consist of 3 private, separate and independent data feeds that enter the Swanwick Centre from 3 separate directions. This was done for safety. The same should be used by HIAL but Helios only mention Dual Redundant Communications.

Helios consulted the University of the Highlands & Islands and the Scotland Wide Area Network regarding communications. Not BT Openreach.

When discussing the communications links required by remote towers, Helios states the following:

"The data will also need to be sent with minimal delay, in addition to resilience and fail-safe requirements to ensure service continuity. Doubts have been cast on whether the existing communication lines will be sufficient and this will need to be further examined with British Telecommunications (BT), the communications infrastructure supplier to HIAL."

Only one supplier of communications is listed as having given costings, Capita, who operate the Scotland Wide Area Network. I believe that a more robust investigation of Communications links should have been conducted given their critical role in the safety and reliability of the ATMS project.

Concerns about communications links needed by the HIAL ATMS project have also been raised by MSPs, MPs, Local Authorities & Air Traffic Staff throughout to HIAL.

Recommendation by Helios that HIAL pursues the Remote Tower and Centralised APS option.

It still astounds me that the remote tower and centralised APS option is put forward as the only solution for HIAL´s perceived problems.

The central theme throughout the report is one of pessimism surrounding the technical, financial and human aspects of the ATMS project. There is no positive answer on communications links, no positive answer on final costings. The ATMS project has been rejected by staff, the Union, MSPs, MPs, Local Authorities and the Media.

In their study, Helios issue what I see to be a grim warning to HIAL regarding the likelihood in implementing the recommended ATMS option successfully. It is certainly not encouraging.

Helios justify their recommended option as the only one that will solve HIAL´s recruitment and retention problems. Air Traffic staff within HIAL know that staffing problems are of HIAL´s own making. Dysfunctional HIAL recruitment practices and an uncompetitive salary in a competitive market for ATCOs are the main reasons why HIAL struggles to recruit and retain Air Traffic Controllers at all their airports, even Inverness. Centralising will not solve this.