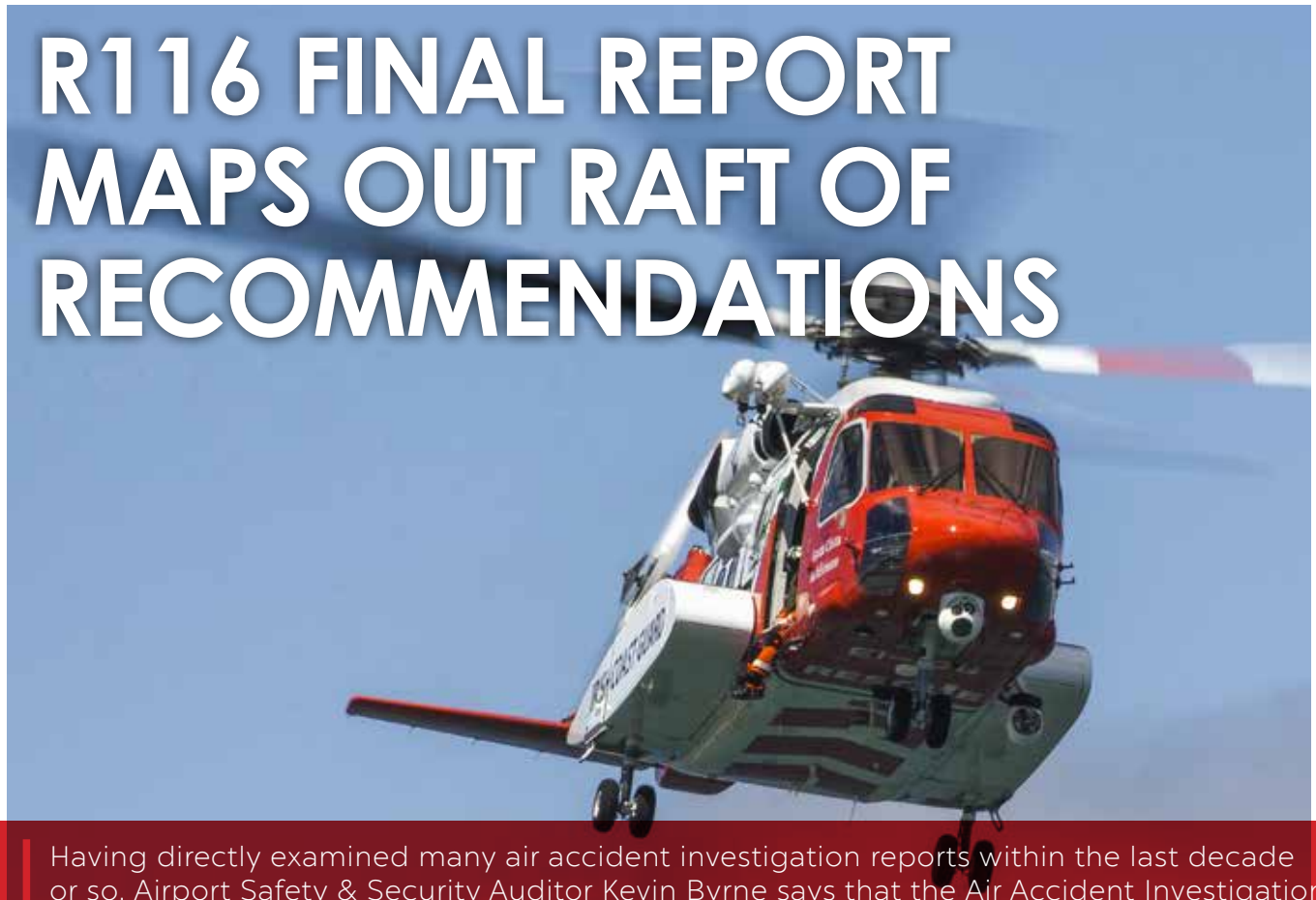
R116 FINAL REPORT MAPS OUT RAFT OF RECOMMENDATIONS



Having directly examined many air accident investigation reports within the last decade or so, Airport Safety & Security Auditor Kevin Byrne says that the Air Accident Investigation Unit (AAIU) final report into the R116 tragedy is one of the most thorough of its kind and points out that the speedy implementation of the report's recommendations in their entirety would be welcomed by the whole aviation community.

In some 350 pages the AAIU's final report, which was released on 5 November 2021, examines the details of events leading up to the accident, the unfortunate crash itself and it goes on to make 71 findings and no less than 42 recommendations.

The Appendices, marked A to X, run to 114 pages, which is certainly noteworthy. It is worth repeating that the sole purpose of all air accident investigations is to discover precisely what happened so as to prevent a recurrence; no blame is apportioned to any individual or organisation.

At the tasking stage of the mission there was some confusion at Coast Guard level as to whether the casualty on the vessel, 140 miles out in the Atlantic, needed urgent removal to hospital. In all probability, the mission was not essential under the agreed protocols in place at the time.

The S-92A helicopter was in full working order when it collided with the Black Rock Island, and it is difficult to explain why this serious obstruction to air navigation was neither on the map being used for the let-down procedure, nor was it identified as part of the Enhanced Ground Proximity Warning System. During the overland segment of the flight the winchman used the 1:50,000 Toughbook imagery to assist but this showed neither terrain nor a lighthouse at Black Rock, but instead indicated open water.

REMOVAL OF 'FALSE OBSTACLES'

When the S-92A entered service in 2013 the omission of Black Rock from the EGPWS terrain databases had been noted; it was common knowledge that the operator was in discussion with the IAA to have "false obstacles" removed from the latter's Aeronautical Information Publication.

The investigation found no evidence that the operator had requested the IAA to add missing obstacles to the AIP such as Black Rock (Mayo), Black Rock (Sligo) or the Bull Lighthouse.

The investigation was advised by Ordnance Survey Ireland that it had provided the operator with all of the imagery requested from its Discovery Maps series; this ended some four kilometres east of Black Rock Island. The Operator did not have formal processes in place to validate the map and chart imagery used in its helicopters.

To compound matters, neither pilot had flown into Blacksod for refuelling for some time and were unfamiliar with the let-down procedure. Just six days prior to the accident, a Dublin-based crew had flown into Blacksod at night using the same APBSS route at 500 feet.

As three of the crew were unaware of the presence of Black Rock, the co-pilot drew attention to it as he had been once based at nearby Sligo. The value of local knowledge to manage risk and identify possible hazards was well illustrated in this case.

ABOUT THE AUTHOR:
Airport Safety & Security Auditor Kevin Byrne took early retirement from the Air Corps in 2012 having served in many command and staff appointments at Baldonnel. He holds a BA degree, an MSc in Airport Planning and Management and is a Chartered Fellow of the Chartered Institute of Logistics and Transport. After retirement he spent seven years lecturing part-time in DCU and Coventry University. Currently he is employed as an airport safety and security auditor. He remains a regular contributor to radio and television programmes on aviation topics, both at home and overseas.

SAFETY CULTURE UNDER SPOTLIGHT
An examination of the safety culture by the operator is revealing. For example, Table 25 of the report is sobering, as it outlines the number of flight safety meetings that were undertaken in the four operator bases between 2011 and the time of the accident.

In 2016 no meetings were recorded in Sligo, and it is not apparent that a nominated safety officer was in place at that location. Meetings were often held at crew handover time but were rarely scheduled as a singular, stand-alone event. Numerous witnesses indicted that the safety concerns of crew members were not resolved over time and that some simply disappeared from the consciousness.

The minutes of some meetings could not be found, while no standard method of recording concerns raised by crew was in vogue. Among the various concerns were complaints about the Low-Level Route Guides and the SAR helipad surveys, not to mention the poor cockpit lighting of the S-92. It is hard not to conclude that the Safety Management System was suboptimal and that a complacency existed at various levels in the operator's management structure.

However, what about the regulator, the IAA? It is difficult to understand why this situation was not discovered over time by the national aviation regulator, whose attention to detail in respect of Irish-based airlines has never been in question.

The reason that commercial aviation is so safe generally is because the internal quality and safety audit systems, combined with rigorous external regulatory oversight, ensure that errors are detected and corrected with reasonable expediency.

ACTIVITIES 'NOTED', NOT 'APPROVED'
The IAA issued licences to the aircrews of the operator, registered and certified to fly the helicopters and licensed the engineering staff and others to ensure that a legal and competent regime was in place.

In effect, the IAA, for a great deal of time prior to the accident, "noted" the activities of the SAR operation but did not actually "approve" them.

The operator of the accident aircraft was the holder of two approvals issued by the IAA, that is, an Air Operator Certificate and an Irish National Search and Rescue Approval. The investigation felt that it seems contradictory that the latter approval would be granted based on a procedures manual which the IAA says it did not "approve" but merely "accepted".

Therefore, the IAA's 'approval' was predicated on a document which the Authority said it did not approve! In June 2016 the IAA indicated to the operator that National SAR approval was not an Aerial Works Permission, since it was proposing to revert from the former to the latter.

Furthermore, the IAA was seeking an appropriate standard against which the operator's operations might be audited, notwithstanding any distinction between SAR Approval and Aerial Works Permission.

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INTEGRAL AVIATION EXPERTISE LACKING
The report indicates that the Irish Coast Guard had no integral aviation expertise but instead relied exclusively on external consultants. Nor was there evidence of any Safety Management System (SMS) in place as there was some confusion as regards responsibility for, and discharge of, aviation oversight of SAR operations.

It has been my personal opinion for many years, having flown on many SAR training missions with both the Air Corps and the Coast Guard, and having despatched many SAR missions from Baldonnel, that every assistance must be given to those flight crews who put themselves in peril to assist others.

Equipment must be fit for purpose and regularly inspected. Training in flight simulators and in the air must be not less than the same standard as that given to commercial airline crews.

Safety issues must be addressed at source and without delay and be overseen by a competent agency with appropriate regulatory powers. The speedy implementation of the report's recommendations in their entirety would be welcomed by the whole aviation community.