

## **CAA POLICY ON ENGINEERED MATERIALS ARRESTING SYSTEMS (EMAS)**

Since 1999 the US FAA has undertaken research programmes to evaluate and develop arresting systems using engineered materials. This research was driven by the recognition that many runways, particularly those constructed prior to the adoption of the increased requirements, and which are constrained by natural obstacles, local development, and/or environmental factors, have limited potential for Runway End Safety Area (RESA). Additionally, there had been accidents at some of these airports where the ability to stop an overrunning aircraft within the RESA would have prevented major damage to aircraft and/or injuries to passengers. These research programmes, as well as evaluations of actual aircraft overruns into an Engineered Material Arresting System (EMAS) installation, have demonstrated that EMAS systems are effective in arresting aircraft overruns, and they are now allowed for in FAA aerodrome requirements.

The CAA has recently completed an extensive review, which included evaluation of the FAA research, system performance specifications and guidance material, and an examination of the only EMAS system currently approved. From this review the CAA has developed its policy on the use of EMAS at UK licensed aerodromes.

CAA policy is:

- (a) to permit the installation of EMAS at UK licensed aerodromes as an alternative where a 240 m RESA cannot be achieved;
- (b) to accept the FAA performance specification and guidance material as suitable for use in EMAS design in the UK, subject to a suitable safety assessment by each aerodrome on their own circumstances (i.e. where to site the system, dimensions, operating conditions etc.);
- (c) to permit EMAS to be located within the runway strip or RESA as determined by the design assessment;
- (d) to permit an increase in runway declared distances that can be achieved from the installation of EMAS only where installation of EMAS has provided the equivalent to a 240 m RESA and 60 m strip end (a full length EMAS for the design size aircraft).

The CAA will develop guidance material on the assessment and oversight of EMAS as required, based on existing (FAA) information, data from the system manufacturers and experience as UK applications are examined.

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Aerodrome Standards Department  
Safety Regulation Group  
Civil Aviation Authority

Should you have queries regarding the above policy, please email [aerodromes@caa.co.uk](mailto:aerodromes@caa.co.uk).