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East Midlands Airport Runway Resurfacing

Colas has a successful track record of implementing works for the Manchester Airport Group (MAG). In 2016, this continued with contracts awarded to carry out taxiway maintenance at Bournemouth Airport, car park resurfacing at Stansted Airport, and, most recently, runway resurfacing works at East Midlands Airport.



The Need

The East Midlands Airport project required Colas to rehabilitate the airport's 2.9km 09-27 runway on behalf of MAG's framework management contractor, Galliford Try.

The works involved removing the existing asphalt pavement and resurfacing the runway and taxiway tie-ins with a new high-quality Beton Bitumeux Aeronautique (BBA) surface course.

The works were undertaken during day and night shifts across 5 consecutive weekend closures of the runway.

The project marked the first time that a UK commercial airport had implemented full shutdowns across multiple weekends to allow large scale runway re-surfacing.



The Approach

Collaborative working was fundamental to Colas' approach to the East Midlands Airport project in accordance with our BS 11000 Collaborative Business Relationships accreditation.

Colas were appointed for Early Contractor Involvement (ECI) over 3 years ago to support Costain and then Galliford Try to develop an optimum solution for the project. Colas worked with designer, AECOM, as part of an integrated team and provided comprehensive BBA mix designs to meet the requirements of the specification.

The ECI period allowed Colas and Galliford Try to develop the overall construction programme, clarify any design issues, develop risk contingencies, and identify further opportunities.

During the ECI period, Colas developed plans and measures to ensure the project was suitably resourced with over 300 staff and operatives required to meet the intense programme each weekend.

- > 5 consecutive weekends
- > 50,000t of asphalt material laid
- > 2.9km runway resurfaced
- > 300 operatives, staff and project management personnel
- > 3 mobile asphalt plants
- > 600t/hour minimum production

Colas began the delivery of the surfacing element of the project on 5th November 2016, following the carefully coordinated mobilisation of all resources to fulfil the project requirements.

Within each 48 hour weekend possession, Colas had a planned 30 hour programme, with a 6 hour contingency window, to implement the surfacing works.

Colas teams planed off the existing Marshall Asphalt runway surface course over a width of 44.2m before laying a new BBA surface course.

In addition, material in the central 22m keel section of the runway was replaced to a depth of 165mm. The runway works

involved the use of 6 paving machines, with 5 laying in echelon formation, to ensure no cold joints were created in the surface.

Colas also laid new BBA surface and regulating courses on both runway shoulders and taxiway tie-ins.

Upon project completion, Colas had laid approximately 50,000 tonnes of asphalt material. To produce the tonnages required, Colas established 3 mobile asphalt plants on-site, which were in operation simultaneously, providing a continuous supply of BBA.

