



## Isle of Man RESA project

The Isle of Man RESA project involved the extension of the existing runway to provide extended Runway End Safety Area's compliant with international best practice. The contract included the construction of a promontory by reclaiming land from the sea, together with new taxiways and a complete rehabilitation and re-profiling of the existing runway.



### Project Details

Colas secured its part in the £37 million contract as part of a collaborative team through a process of Early Contractor Involvement. Over 158,000m<sup>2</sup> of new pavement was built at Ronaldsway Airport on the Isle of Man, with around 25,000t of asphalt surfacing produced to French specifications contributing to the overall project volume of 65,000t. Isle of Man Airport also took the decision to use the BBA asphalt technology from France for their runway reconstruction project.

Airport operators are fast catching on to the materials' many benefits. The airport's main runway was reconstructed to bring it up to latest international standards for new safety regulations which were expected in 2010. Work started in March 2008 and was completed in two main phases with Colas working for main contractor Balfour Beatty.

#### Reduced costs

40% reduction in new asphalt

56% reduction in planing

29% reduction in energy consumption

28% reduction in CO<sub>2</sub>

49% reduction in lorry movements on local roads

10 days of night works to complete the runway



Phase one, completed in 2008, has focused on building new taxiways, reconstructing the runway to improve its geometric profile and enlarging the starter strip and Runway End Safety Area (RESA) at the western landward end of the runway. The majority of the work was completed at night, with asphalt mixed each shift using Colas' Ermont mobile plant. Aggregate for the pavement sub base, asphalt and drainage construction was supplied from a combination of quarries in the Republic of Ireland – by sea – as well as the Isle of Man's Billown and Poortown quarries.

"Surfacing outputs are dictated by flights, weather and phasing in what was the busiest time of the year for the airport, but have been significantly greater than with conventional UK surfacing materials" commented Director, Carl Fergusson. "BBA materials can be mixed and laid quicker, which is obviously a great benefit where a lot of surfacing is to be carried out in limited runway possession periods".

"BBA asphalt also has greater tensile strength than Marshall Asphalt so has a higher resistance to surface cracking and deformation. There is also the possibility of reducing pavement thicknesses when compared to conventional UK airfield surfacing materials without compromising performance."

Balfour Beatty and Colas completed Phase One of the Ronaldsway project including the main runway reconstruction in October 2009. In 2010 the team returned to the Isle of Man to build a new starter strip and RESA at the eastern end of the runway on a new promontory bund which will be reclaimed from the Irish Sea.

The heart of the promontory was formed using fill won from a combination of island based sources including Colas's own Turkeyland quarry together with sea dredged material, then protected by a coastal barrier of 42t blocks of stone imported from Norway.

The runway extension was built up to level with marine dredged material and then surfaced by Colas with more BBA asphalt.

**"The resources that we were able to employ on this contract assisted Colas with delivering on time and with no impact to the airfield and its operations."**

Brandi Davey, Airfields Project Manager

Colas Limited, Wallage Lane  
Rowfant, Crawley  
West Sussex RH10 4NF  
T: 01342 711000  
F: 01342 711199  
E: info@colas.co.uk