Heathrow taxiway and cul-de-sac reconstruction

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<tr>
<th>TOTAL COST</th>
<th>COMPLETED</th>
<th>DURATION</th>
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<td>£3.1M</td>
<td>2013</td>
<td>6M</td>
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**Sectors**
- Transport, Aviation

**Project profile**
- Replacement of a series of five taxiways to safeguard continued aircraft operation

**Client**
- Heathrow Airport Limited

**Stage**
- Complete

**Highlights**
Phase 1 of the project was completed one week ahead of schedule. Phase 2 was completed on time for a delighted customer, despite delays from fireman isolations.

**Project Description**
Heathrow Airport’s Alpha Taxiway comprises of a series of taxiway ‘blocks’ constructed during the last 50 years. This Project described as “Block 115” featured five blocks that had suffered deterioration, hence requiring urgent replacement.

The project involved the breakout of the existing failed concrete taxiways and their replacement with thicker F6 pavement quality concrete layers, with an emphasis on returning sections of taxiway to use as soon as possible. Project scope also included the removal and replacement of Airfield Ground Lighting within the area and the construction of a 250 metre access road. The pavement-laying element of the project was delivered directly using Morgan Sindall’s own specialist slipform paving machine and paving operatives.

A number of special measures were integral to this project due to the sensitive nature of the airfield site and the complexity of airport operations. As an example, site possession for one element of the project involved removing from use a one kilometre stretch of taxiway by the airfield. This was demarcated using 900 cones, 100 metres of specialist jet-blast deflector fencing and 2.5 kilometres of temporary edge lighting. All of this took place in one night - meticulous planning of this activity was crucial to the project’s success.

**Responsible business**

**Profit**
Use of 100% Ordinary Portland Cement Pavement Quality Concrete reduced the curing period from 28 to seven days, allowing sections of taxiway to be returned to use as soon as possible. All broken out concrete was crushed and reused on Heathrow projects, including 500 tonnes which was used on the block 115 project itself.
changes to design and increased quantities of pavement quality breakout.

Location
- London

Project key facts
More than 10,700m$^3$ of pavement quality concrete was placed during the project.

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Challenges
Delivering a project at a remote location surrounded by live taxiways and Heathrow’s Northern Runway. Two live taxiway crossings were created to allow for access and operatives were comprehensively briefed on their use and associated precautions.

The nature of the project required working closely with airfield operations as access to site was via uncontrolled and controlled crossings across the Bravo taxiway. Good working relationships had to be developed with airfield operations to allow the transportation and logistical movements.

Testimonials
“This has been another challenging project with tight timescales, so thanks to all your personnel that have worked on the project. The dedication and effort is really appreciated as this helps to demonstrate to airlines that we are more than able to deliver complex projects to time and quality.”

Andrew Mitchell
Heathrow Airport