



Search and rescue The new linear lighting system, which incorporates LEDs, T5 luminaires and colour-coded columns, helps passengers to quickly navigate their way through airport security.



100 lux when areas are not in operation, meaning passengers instinctively head to those lanes that are open," he adds.

A particular challenge from a lighting perspective was the escalators that passengers use to enter the departure lounge. "They're notoriously difficult to light because you always end up with a fitting that is a long way above the escalator, lighting down," says Fordham. A further issue was the need to be able to maintain fittings without having to use a set of steps on the escalator itself.

The solution here was to use Phi's Iris LED downlighters, embedded into the wall alongside the escalator. "Putting them in the walls rather than the ceiling means you light all the vertical surfaces and the ceiling quite well because the lights face each other across the space," he says. "The LEDs themselves will require less maintenance too," he adds.

Intelligent developments

Energy saving was another important aspect. Fordham says the original search area had standard lighting, which had been tweaked over time to create a workable but inefficient system, with no form of control gear.

"The new scheme has the benefits of the T5 luminaires with a micro-prism diffuser, so the light output ratio of the fittings is much better than what was there previously," he says. "It's all DALI-controlled to a constant illuminance, so you're not over-lighting when the installation is new; it will automatically drop down to hit the required level." In all, the new system uses two-thirds of the previous load, he adds.

Taken along with the other design improvements, Fordham says the new system, which was completed in May 2012 after a 10-month staggered rollout, has resulted in notably shorter journeys through the check-in and security process. In turn, this has seen higher numbers of passengers spending longer in the departure lounge – driving up retail revenues – and reduced staff time spent directing people around the airport. "The feedback is that passengers and staff appreciate the new area," he says. ■

● *Morgan Sindall's Gatwick lighting scheme won the Low Carbon and Public Building categories at this year's LDAs. Turn to p7 and p31 within our special Awards supplement for more information.*

PROJECT DETAILS

ARCHITECT 3D REID **MAIN CONTRACTOR** VINCI

M&E/CIVIL ENGINEERING MORGAN SINDALL
PROFESSIONAL SERVICES

M&E INSTALLATION NG BAILEY

MAIN LIGHTING SUPPLIER PHI LIGHTING

COLUMN LED LIGHTING RADIANT LIGHTING

**EMERGENCY LUMINAIRES, CENTRAL BATTERY UNITS
AND TESTING SYSTEM** COOPER



“The lighting runs the length of the rectangle so you go instinctively left or right to join a queue”

Under the search lights

A lighting scheme from Morgan Sindall at Gatwick Airport has not only reduced the airport’s carbon footprint but also plays a vital role in easing passenger congestion. **Nick Martindale** reports

When Gatwick Airport embarked on a project to consolidate its three passenger search facilities into one large area, the lighting scheme played an important part in helping move travellers effectively through the facility and speeding up the journey from the check-in desk to the departure lounge.

The positioning and direction of T5 luminaires – using Phi Lighting’s Stria range – helps to subliminally guide passengers to where they need to be by providing a continuous ribbon of light, says Peter Fordham, senior lighting designer at Morgan Sindall Professional Services, which oversaw the mechanical, electrical and civil engineering.

“The space is essentially a big rectangle and you come in a third of the way along,” he explains. “The first section as you enter the area is where the queues start to form and the lanes sit in the centre, and then the back section is where everybody

congregates having been through security before moving towards the exit.

“As you enter, the lighting runs the length of the rectangle, so you go instinctively left or right to join a queue. But when you’re at the front of the queue, the ceiling tiles and lights turn 90 degrees and run across the rectangle – this is the direction you’ll walk in when you reach the end of the queuing zone.”

Lighting also plays a prominent role in helping customers to navigate the 19-lane queuing system, with the lanes divided into four colour-coded blocks and a display showing the varying waiting times in each.

“The lanes are arranged around structural concrete columns, which are roughly 1m in diameter and lit with coloured LEDs from above,” says Fordham. “There’s no signage that tells you where to go; it’s just down to the colour of the columns.” The fluorescent lane lighting also dims down from 200 lux to ▶