



New Hotel Taxiway, Stand 16 and South Stands



Client Contact Name & Number	Alejo Perez Monsalvo (01582) 724182
Project Location	London Luton Airport
Project Cost	£8.2M
Project Start & End Date	Start – January 2017; Completion – December 2017
Project Details	Construction of a new taxiway, extension of aircraft stand pavement and reconfiguration of an aircraft pavement within a live airport environment
Form of Contract	NEC Option A
Design Consultant	Alex Lake - Fjori Limited

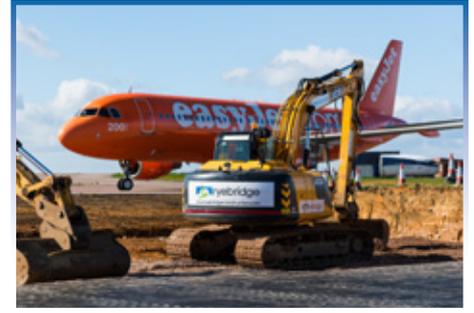
Project Works and Key Quantities

- ▶ Excavation – 18500m³
- ▶ Material recycled and re-used within the works – 4500m³
- ▶ Supply and compaction of Type 1 – 12500m³
- ▶ Cement Bound Granular Material – 15,700T
- ▶ Foam Base – 4800T
- ▶ Asphalt Surfacing – 19500m²
- ▶ Asphalt reinforcement grid – 14200m²
- ▶ PQ Concrete – 2200m³
- ▶ Drainage – 4000m
- ▶ Attenuation Tanks – 1750m³
- ▶ AGL Pit and Ducting System – 7000m and 104 Pits
- ▶ Complete on time and under budget

Project Principals and Objectives

The project was to construct a new taxiway in order to enable growth in passenger numbers and flights using the airport. In addition, to extend an existing aircraft stand at either end to accommodate 2 additional aircraft. The third area of works was to reconfigure an existing executive aircraft stands to accommodate additional aircraft and new roadway for aircraft maintenance vehicles and plant.





Solution Focused Approach

Adopting a solution focused approach was essential to success. We took the time to understand the needs of our client and kept this at the centre of our planning. Our client required the confidence that the airport would remain fully operational while these essential works were being completed in a safe and timely manner. The project was undertaken on a live aerodrome that included works during limited time possessions. This included working close to a live operational runway, navigational sensitive areas and taxiways. This required close collaboration with key stakeholders and operational teams to ensure that there was no impact on the flow of passengers and airport traffic. The project was strategically phased into three separate work areas and the timeline was crucial to ensuring continuity of service for the Airport.

The first element was the reconstruction and configuration of an existing series of stands to accommodate additional aircraft and service roads. Works on this element included:

- ▶ Extending the stands to accommodate a new service road
- ▶ Construction and erection of a PCC barrier to act as a vehicle crash barrier and retaining wall with a Dft compliant fence
- ▶ Ground stabilising to facilitate works with concrete slabs and reinforced tie bars
- ▶ New airside/landside security fence.

The next element was the construction of new extensions to an existing aircraft 4 pack of stands. Key considerations were:

- ▶ Existing stands needed to stay operational while extension works took place
- ▶ Stands provided key aircraft parking, passenger area and through route for emergency services
- ▶ Detailed planning and collaboration required as essential operational at all times. This was successfully achieved and the area remained fully operational at all times.

The third element of the project involved the construction of a new taxiway tie into the Runway and one of the main taxiways, Taxiway Alpha, construction and upgrade of new aircraft stands. Scope of works and considerations included:

- ▶ Upgrade of the AGL system preferred subcontractor ATG including works within the existing switch room ensuring seamless switch over following completion
- ▶ Tie in to the runway required works scheduled through night shifts with operational handover each morning.
- ▶ Close liaison required with departure and arrivals to maximise work time to achieve project timeframes
- ▶ Close working with CAA from design to construction phase essential as it facilitated the efficient and essential closure of runway when required, in addition it ensured taxiway and runway strip gradients were complied with.

Innovation and Best Practice

- ▶ The project was awarded a Green Apple Environmental Award for the recycling of materials removed and use of recycled materials within the pavements
- ▶ The works for each phase and handover were complete on time, on budget with 100% safety record
- ▶ All works were completed with no disruption to the airport operation with emphasis on major tie ins to the Runways and Taxiways
- ▶ We optimised the programme, optimised the pavement designs and used specific construction techniques when immediately adjacent to the runway to ensure that all works were de-lethalised and surfaces safeguarded prior to runway re-opening each morning
- ▶ We developed the design around not only the programme needs stated in the ITT, but also handed the project over some 14 weeks early, thus avoiding construction works overlapping with the busy Summer schedule. This was achieved through specific areas of value engineering in collaboration with Airside Operations and Key Stakeholders.

Client Feedback

On completion of the Stands Phased Works:

“Congratulations! I know that the whole project team has worked hard to achieve this important milestone, which takes London Luton Airport on its journey to increase capacity and meet future needs.”

Ruari Maybank

Construction Director, London Luton Airport

On completion of the whole works and Runway tie-in:

“Congratulations to everyone on achieving another important milestone in our project to increase the capacity of London Luton Airport. The airside works have been a great example of people working together with a singular vision, to plan and deliver the work to a tight programme. Thank you all, and what a great note to finish on before our Christmas holidays.”

Ruari Maybank

Construction Director, London Luton Airport

Moving Forward

The success in this project reinforces our commitment to early engagement and a close partnership with our clients. Our clients can be certain that we have their objectives at the centre of what we do. We operate exclusively with a small pool of subcontractors so we can be certain of quality, safety and delivery.