



# Temporary Drop-off Zone and Overbridge



Client Contact Name & Number	Ruari Maybank (01582) 395 256
Project Location	London Luton Airport
Project Cost	£3.5M
Project Start & End Date	Start – February 2018; Completion – May 2018
Project Details	Design and construction of a temporary drop off zone including a road over bridge structure to facilitate free passenger movement from drop off to terminal

## Project Principals and Objectives

In February 2018 Ryebridge was appointed to construct a temporary drop off zone, including a road over bridge structure to facilitate free passenger movement from drop off to terminal. All works were required for completion no later than 30th May 2018 with the handover of the Mass Passenger Transit (MPT) site on the 1st May.

London Luton Airport required the design and build of an enabling works package consisting of:

- ▶ Temporary drop off zone
- ▶ Relocated barrier controls
- ▶ New perimeter road and supporting road over bridge structures
- ▶ Plan and fully implement an enablement strategy for a new Multi-Storey Car Park allowing the existing DOZ to be closed and the site cleared for the construction of the proposed Mass Passenger Transit (MPT) system
- ▶ Removal and storage of high mast lights ready for reinstatement at a later date
- ▶ From April 2018 the contractor was to permit access onto the Multi-Storey Car Park (SCP) 2 site for 6no test piles to be installed and tested by the MSCP2 contractor.

During the works there was also the requirement that deliveries were not permitted during the Airport's Peak Operating Period. The Peak Operating Period was between 04:00 and 08:00 daily.







## Solution Focused Approach

Solutions were required in the design and plan as it was imperative that airport operations were maintained and unaffected. The Ryebridge plan was developed in consultation with all stakeholders. It was successfully formulated in line with the requirements of the traffic validation reports and developed on the basis of a maximum queue time of 5 minutes at any point. In addition, there was the completion of a full swept path analysis to ensure that all types of vehicles are able to use the road.

**Safety and Security of the works** – Ryebridge and its staff have many years of experience working in security sensitive environments, all matters of airside safety and security were considered during the development of the works by secure segregation of public, staff and deliveries to the airport whilst maintaining full operation use minimizing disruption.

Maintaining Airport operations by keeping access to the temporary drop off zone operational during operating hours was taken into account within the design. The pavement designs sought to minimise areas of full depth reconstruction, preferring inlay where possible.

## Innovation and Best Practice

Experience and knowledge meant we identified the need for critical path service diversions and treatment around the Short Stay Car Park and Temporary DOZ areas. We ensured that the risk to project outturn costs and the delivery programme were minimised. Within the first three weeks Ryebridge undertook trial holes to establish exact services data ensuring design and construction was impacted upon later in the programme.

### Road Over Bridge Structure

This element was a major piece of civil engineering as it involved constructing an over bridge ramp 140m in length over a height at its peak of 6m. The scope of this work included:

- ▶ Construction of a fully reinforced self-supporting structure requiring 160No 14m deep piles

- ▶ The ramp capacity required 3 lanes of various loading traffic from cars and vans to HGV deliveries
- ▶ Capability to become main arterial for the passenger buses to and from the terminal including external bus operating companies
- ▶ Construction next to live lane traffic where a significant amount of traffic management was required to facilitate the different stages of construction.

Innovative practices and experience was employed to create detailed traffic management and phasing plans. This was supported by early engagement with all operators and stakeholders in order to ensure success in delivering this element. This is while ensuring full operational use for the Airport as a business and for passengers, staff and customers.

### Innovation and Client Savings

It was originally proposed that a full re-build of an existing car park would be required as part of the works. Ryebridge challenged this, carried out trial holes on the existing surface and designed the works to incorporate a partial re-build and surfacing solution. This resulted in significant savings for the client of approximately - £700K.

Ryebridge also considered the existing levels on the site and offered a solution to the design that resulted in a significant retaining wall not being required. This resulted in a £200K saving.

Through the Ryebridge employed electrical sub-contractor we achieved a £75K saving for the re-use of the existing High Mast Lights which were originally due to be removed. In addition to the above the phased works were complete on time, on budget and safely.

## 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. In this particular project we are extremely proud that our ability to build relationships and add value to our clients is evidenced successfully throughout.