London Ashford (Lydd) Airport

Project: LAL Airport
Architect: R Johnson
Date: 25 September 2007

Following the submission of the planning application to Shepway District Council, the following comment has been received in respect of the roof forms to the terminal building:

'The two curved roofs to the two main parts of the building are attractive architectural features of the buildings which reflect the aeronautical function of the proposal. It is therefore considered unfortunate that the broad sweep of these roof lines is broken up by full length ventilators, even if this is a 'green' solution to this need (it is unclear from the material seen if this is the case). If this is unavoidable then I feel the roofs of these items should reflect the general curve of the roof rather than be flat as shown.'

Architectural Design Statement

In support of the architectural proposals, the following statement was made describing the roof form and roof top features as follows:

Following consultation with the Civil Aviation Authority's Safety Regulatory Group, the roof design for the terminal building has incorporated all measures that mitigate against bird nesting at roof level.

General description of proposed roofs to terminal building

The current proposals for the terminal building comprise two principle volumes, each having a solution that takes two different roof forms. The biggest volume accommodated incorporates a standing seam roof, forming a shallow curved mono-pitched profile. This form has been chosen to reconcile a number of different spaces contained below, notably the public concourse and baggage handling areas.

The second roof takes the form of a shallow barrel vault which spans over the passenger departure lounge below. This simple roof form is interrupted by a single roof light that continues for the full length of the departure lounge located at the apex of the roof. This roof comprises a metal clad standing seam roofing panel to match the adjacent volume.

Anticipated features to roof

Each of these roofs have been interrupted with wind catcher "pop up" features that occur at regular intervals. These features have been introduced to enhance the internal environment of the terminal building, drawing in air to serve air handling units located below the roof line and helping to exhaust unwanted air from the building. The larger curved roof has a number of these wind catcher features which have been designed in such a way to present a full length projection, with louvered openings appearing at regular intervals within it. This feature actually provides a void between these louvered openings so that air may pass between them. Both these voids and louvers located at roof level are protected from bird nesting with a suitable mesh while still allowing air to pass through them.

An additional feature on this roof is a full length glazed roof light that floods the public concourse area with natural daylight. This is contained within the plane of the roof and therefore provides little opportunity for birds to nest. The barrel vault roof comprises a single wind catcher feature which acts in the same way as those described above.

Summary

In response to the comments made to the current roof design, we would summarise our response to the comments made in respect of the roof features as follows:

The terminal building has been designed to make a strong statement concerning the nature of arrival and departure from the site and each of the features of the building are intended to provide a complimentary statement supporting this conceptual approach.

The two principle volumes that make up the terminal building are expressed using strong roof forms which are expressed as sweeping curves and terminate at the highest level with a continuous roof ventilator. This roof form has been influenced by the landscape that surrounds the site.

The roof over the arrivals hall is expressed as a single mono-pitched curved roof form, while the roof over the departures hall is expressed as two single mono-pitched roofs coming together at the point where the roof ventilator is located. The principle reason for forming each of these roof features is to provide air intake and extract to serve the volumes below. The building containing the departures hall also has glazing contained within it to flood the hall below with daylight.

Both ventilators are expressed as a linear feature extending the full length of the building. In doing so, they serve as a visual anchor to the dynamic roof form below. They are also intended to be a stabilising feature at roof level, forming part of the roofscape and serving to anchor the roof to the building. Each ventilator is intended to provide visual interest by contrasting with the strong curvature of the roof below.

The roof ventilators are intended to be totally subservient to the main roof and will be developed further during the design development stages to be louvered in appearance so that the impact of the main sweep of the roof below is not diluted. Given that these features have a very different appearance in terms of their material selection, we strongly believe that they should also convey a different form to that of the roof. Equally, their function is distinct from other elements of the roofscape and we believe that this should be clearly legible on viewing the building on approach by land or air.