

Abstract

Title: Airport Runways Construction and Procurement

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Purpose: This dissertation originated from the researcher's work experience with a runway construction project. The problems that arose during the project became a concern. No runway construction or refurbishment project in Ireland had been procured using a method other than the traditional design bid build method. The reasons for this are explored in this document. It was expected that the findings and recommendations would be of use to the industry and for the people involved. It was seen as a way of creating a document that would be of benefit to those interested in the airfield construction industry.

Methodology: A comprehensive Literature Review was conducted on the core topics of the dissertation. There was a lack of available literature especially concerning runway procurement within Ireland. The methodology used in the sourcing of primary data was semi-structured interviews. A questionnaire was created to aid the interview process. The participants were mainly from an airport background involved with one or more of Dublin, Cork and Shannon International Airports, with additional interviewees from a roads background for a comparison of opinions to be made.

Findings: The research found that the current construction and refurbishment methods in practice in Ireland are being delivered successfully. Geotextiles are being used but more research is necessary as to assess the full capabilities of their inclusion within a runway pavement. Methods of procurement other than traditional DBB are not being used in Ireland and need to be looked at. This has the potential of resulting in projects being delivered more successfully. Recommendations are made on construction and refurbishment methods to be used, procurement methods and risk and safety issues to be considered.

Keywords: airport runway construction, runway refurbishment, risk and safety, procurement, cost.