

APM Project Management Awards



# WINNER'S

## CASE STUDY



Category

**Overseas Project of the Year 2010**

Winner

**King Shaka International Airport, Turner & Townsend**

### Overview

King Shaka International Airport (KSIA) opened on 1 May 2010 in advance of the start of the 2010 World Cup in South Africa.

The development took just 32 months to build and boasts a state-of-the-art passenger terminal building that handles both international and domestic passengers. It can cater for 7.5 million passengers per annum and incorporates a multi-storey car park, a cargo terminal facility, a fuel farm and fuel infrastructure, control tower and offices, the 3,700 metre runway and airfield.

Stakeholders in Kwa Zulu Natal had submitted many applications for development of the airport before, but the 2010 football event acted as a catalyst for permissions being granted.

The South African lead consortium - Ilembe - won the project and worked with global professional services organisation, Turner & Townsend, to develop the airport.

### Objectives

The objective was to transform an area of South African landscape into a billion dollar green-field airport development that could efficiently manage 7.5million passengers each year.

The project aimed to boost the tourism in the area and to shift the focus towards the adjacent areas for associated trade and development.

Key objectives for the Ilembe project services team were



to project manage the deliver teams effectively to meet deadlines, to produce accurate reports of all production activity and to put in place people, processes and systems to ensure technical documentation was issued on time.

For Turner & Townsend, the project presented a unique opportunity to demonstrate that they have the necessary global presence to take their people, tools and innovation and deliver the client objectives in a culturally diverse environment.

## Resources

Key people from Turner & Townsend UK visited the Ilembe consortium in early 2007 to understand the principle requirements, and to map out the required procedures, systems and tools.

Due to obvious budgetary constraints the project team was built with as many locally employed people as possible, whilst ensuring the necessary skill transfer from the UK offices to South Africa took place.

Knowledge sharing through online meetings and the use of Turner & Townsend's intranet system proved successful.

The ability to draw on the resource and skills base from the UK was helpful yet not all UK best practice worked well for KSIA and had to be adapted to suit local project conditions.

Cultural differences in the levels of planning, expectations on site management, budget approval justification etc, meant that certain levels of project management and controls did not fit, and therefore had to either be shelved or adjusted to suit.

A good example of this was a formal stage approval process. The UK teams found significant benefit and expectation from project clients to ensure that this procedure was rigorously applied to commencing work.

The Ilembe consortium however was confident in

other forms of phased project approval and thus the project team adapted their services to support the clients preferred management and governance approaches.

## Challenges

In a nutshell, the challenge was simple: transform a barren area of South African landscape into a billion dollar green-field airport development that could efficiently manage 7.5 million passengers each year.

Given the South African role as host for the FIFA Football World Cup in 2010, the project was subject to a very tight timescale for design, construction, integration and handover to the operator.

These schedule pressures, together with the constraints of an extremely competitive fixed price, lump sum EPC budget contract, all made for a remarkably challenging project.

Furthermore, owing to the location of the development in an area of outstanding natural beauty in Kwa Zulu Natal, the decision from the Department of the Environment to start the development took longer than expected, which delayed the project by 77 days.





## Co-ordination

Faced with delays to the schedule, Turner & Townsend assisted the Ilembe team to set in motion a plan to meet the 1 May 2010 deadline. This partly involved the formation of project clusters combining designers, builders and cost managers to ensure consistent understanding of the design and integration and in order to drive the schedule.

The cultural differences in updating and planning construction schedules all required time to be spent understanding the pros and cons prior to trying to enforce a UK adopted approach where a local, more well-known method could be just as effective.

For example, risk management concepts were very foreign in the KSIA environment so a less formal method was adopted.

One method of controlling these interfaces was through a centrally controlled register of all critical interfaces.

The register was updated and reviewed regularly with the project director who found this to be a very helpful mechanism of determining key risk areas within the schedule.

Through the management of the dependency register, trends were easily identified to highlight either complex areas or poorly coordinated work faces. This facilitated bringing parties together to define, resolve and deliver scope as a coordinated effort.



## Project successes

Turner & Townsend assisted Ilembe in delivering full Engineer Procure Construct (EPC) contract to deliver the new airport on time and within budget with no major technical or infrastructure failings.

Responsibilities within the team were clearly defined to ensure the project directors knew which member of the team was best placed to action and respond to issues.

Project controls governance procedures were established early and centrally owned to update and improve; meaning that consistency across all Ilembe packages was achieved, which helped standards and reporting, and minimised time wasted on reiterating requirements.

Complete, auditable technical documentation and correspondence has been established to provide a complete programme record. This proved of great benefit to make information available for the close out of final accounts and in the resolution of post completion contractual matters.



**The APM Project Management Awards** have been celebrating project management excellence since 1993 and the broad range of categories is designed to make entry possible for projects and companies of all sizes and complexity.



The awards reflect the invaluable contribution project managers make in all sectors of society and the event provides an opportunity for industry professionals to meet with colleagues and entertain guests as well as celebrate at one of the year's most exciting events.

Highly regarded in the project management industry, the awards reflect the dedication and talent that helps to shape the project management community and the world around us. The finalists, winners and sponsors of the awards attract national publicity for their achievement and involvement. Winning an award provides invaluable recognition and kudos to the careers of winners.



For more details on the awards and how to enter or attend, visit [www.apm.org.uk/awards.asp](http://www.apm.org.uk/awards.asp) or email [awards@apm.org.uk](mailto:awards@apm.org.uk)

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