

Oosterweel link & Nijmegen City Bridge : Two examples of an integral approach to large-scale infrastructure projects in an urban context

Laurent NEY

Director

Ney & Partners s.a.

Brussels, Belgium

ney@ney.be

Laurent Ney, born 1964, is

director of Ney & Partners

Structural Engineering since 1996

Chris POULISSEN

Director

Poulissen & Partners

Gent, Belgium

chris@poulissen.be

Chris Poulissen, born 1964, is

director of Poulissen Architects

Kenny VERBEECK

Project Engineer

Ney & Partners s.a.

Brussels, Belgium

kev@ney.be

Kenny Verbeeck, born 1980, is

project engineer since 2006

Summary

The design and build concept is not a new concept. Since a few years this concept is also adopted for large infrastructure projects. Often the maintenance aspect is included, as is in some cases the financial aspect. This reduces for the client the financial risk, however it also requires a very specific definition of the client's needs and wants.

The Oosterweel link is a large-scale and complex infrastructure project. It consists of the closing of the Antwerp Ring (600.000 inhabitants, and 5th largest port in the world). At present not just port traffic, but especially through-going traffic between Northern and Southern Europe immobilizes the city and the surrounding towns.

Estimated construction cost of the project is 2.2billion euro, is to be realized as a DBFM project, and was selected as final bidder in a 2005-2006 international tender competition, in which also Sir N. Foster and Wilkinson Eyre participated.

In 2008 the Gemeente Nijmegen, the Netherlands, initiated a tender process to find a solution to a mobility problem that is slowly bringing the entire city to a halt. Here also the client chose the DBM concept for the tender process. The financing of the project is not a responsibility of the bid winner. On the contrary, for this project the total budget was a known parameter, and fixed by the Gemeente Nijmegen at 140 million euros. Several international teams competed, in February 2010 the combination BAM/Max Bogl/Ney-Poulissen Architects & Engineers was nominated winning bidder.

The project mainly consists of a large span bridge over the river Waal, and 1.2km of smaller spans crossing the 'Uiterwaarden'. In order to create a connection between the existing city center, and the planned city expansion across the river, the main goal of the tender process was to find the most qualitative "city bridge".

In this paper the impact of the Design & Build concept is discussed for the Oosterweel link project and for the City Bridge Nijmegen.

Keywords: Design & Build, Oosterweel link, City Bridge Nijmegen, Structural Design, Bridge Design

1. Introduction

The design and build concept is not a new concept. Since a few years this concept is also adopted for large infrastructure projects. Often the maintenance aspect is included, as is in some cases the financial aspect. This reduces for the client the financial risk, however it also requires a very specific definition of the client's needs and wants.

In a classical project the architect transforms this program of demands into 'a project' which is then put on the market for execution by a contractor. In the DB(f)M concept the architect finds himself working directly for the contractor, and not directly for the client.