



## A Particular Studies Management for an Unusual Bridge Project at Sea at la Réunion Island

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### Abstract

The project of the New Coastal Road (NRL) with a length of 12,5 km includes a 5,4 km viaduct divided in 7 viaducts of 770 m long entirely precast near the “Le Port” commercial harbor and completely assembled at sea. The project had to integrate environmental dispositions to protect the marine fauna. Set up at sea, geological maps and geotechnical surveys were needed to provide precise conditions of landing of the footing pedestal of piers. Specific temporary equipment were needed following the construction sequences elaborated by the technical studies. To precast the total viaduct, foundation, piers and segments of the decks with their unusual width of 28m, needed a significant site installation in order to meet the deadlines set in the schedule.

This paper deals with the organization set up by the contractors’s joint venture to manage the issues of the project during the studies stage before the construction works.

**Keywords:** management, detailed studies, foundations, tools, equipment, precasting.

### 1 Introduction

The New Coastal Road (NRL) will allow the inhabitants of the Reunion Island, in the Indian Ocean, to connect quickly and in complete safety Saint-Denis, the capital in the East, with its commercial harbor situated about twenty kilometers further west. It will replace the current coast road with 4 lanes at the foot of the cliff (Fig.1).

This dangerous road exposes its users to two types of risks:

- On sea side, exposure to breakers in case of strong swell, which happens frequently because of the absence of continental shelf;
- On cliff side, exposure to falling rocks, in spite of the presence of safety nets (Fig.2).