

# Cyclone Dani Rehabilitation

**KA PROJCT REFERENCE:** 9100V, 9190V, 9191V  
**INDUSTRY:** Bridges, Official Development Aid, Climate Resilience.  
**DISCIPLINES:** Structural Engineering, Civil Engineering, Mechanical Engineering, Electrical Engineering

## PROJECT SUMMARY

### CLIENT

AFD (Public Works Department)

### LOCATION

Port Vila, Efate, Vanuatu

### PROJECT TYPE

Official Development Aid - Bridges

### YEAR COMPLETED

2002



## PROJECT DESCRIPTION

There were four projects or project activities comprising the Cyclone Dani Emergency Recovery Project undertaken to assist in the recovery after the cyclone. A very concerted and well-coordinated approach by the Government was undertaken to seek support and assistance from the aid providers for the Cyclone Dani Emergency Recovery Project. ADB agreed to provide support for the rehabilitation of damaged infrastructure on Efate Island, and Agence Francaise de Developpement (AFD) on Malekula island and south Santo, and the European Union (EU) on Santo Island. In support, the Australian Agency for International Development (AusAID) agreed to provide consulting services for site survey, design, and supervision of civil works. The Government was already undertaking restoration works.

Kramer Ausenco was engaged by the Government of Vanuatu, under the Agence Francaise de Developpement (AFD) Project, to provide design documentation, tender, contract administration / inspection services for 3 low level bridges and river crossings in Malekula & South Santo. Services included engineering design, tendering, contract administration, management and supervision of the project. The works comprised of the construction of three (3) low level bridges on the Boutnerip river in Malekula and on the rivers of Adsone and Wailapa in South Santo.

Summary of actual costs for the Agence Francaise de Developpement (AFD) Project:

Phase	Actual Cost
Investigations	VUV 11.2M
Evaluation, design, and supervision Malekula and South Santo	VUV 20.3M
Civil works Malekula and South Santo - Three (3) low level bridges on the Boutnerip river in Malekula and on the rivers of Adsone and Wailapa in South Santo.	VUV 261M

## PROJECT ROLE

Kramer Ausenco was engaged by the Government of Vanuatu, under the Agence Francaise de Developpement (AFD) Project as Structural Engineers, Civil Engineers, Mechanical Engineers and Electrical Engineers for 3 low level bridges and river crossings in Malekula & South Santo.

Detailed scope included design documentation, tender, contract administration / inspection services, for three (3) low level bridges on the Boutnerip river in Malekula and on the rivers of Adsone and Wailapa in South Santo.

Detailed services included engineering design, tendering, contract administration, management and supervision of the 3 bridges.

# Cyclone Dani Rehabilitation

## PROJECT DATASHEET

**Project Reference:** 9100V, 9190V, 9191V

**Industry:** Bridges, Official Development Aid, Climate Resilience

<b>ASSIGNMENT NAME:</b>	<b>APPROX. VALUE OF THE CONTRACT:</b>
Cyclone Dani Rehabilitation	~VUV 350 M
<b>LOCATION &amp; COUNTRY:</b>	<b>DURATION OF ASSIGNMENT (MONTHS):</b>
Port Vila, Efate, Vanuatu	36 Months
<b>NAME OF FUNDING AGENCY:</b>	<b>TOTAL NO. OF STAFF-MONTHS OF THE ASSIGNMENT:</b>
Vanuatu Public Works Department and French Government Agence Francaise de Developpment	31 Person-Months
<b>ADDRESS OF AGENCY:</b>	<b>APPROX. VALUE OF THE SERVICES PROVIDED BY YOUR FIRM UNDER THE CONTRACT:</b>
Port Vila, Efate, Vanuatu	~VUV 20 M
<b>START DATE (MONTH/YEAR): COMPLETION DATE (MONTH/YEAR):</b>	<b>NUMBER OF PROFESSIONAL STAFF-MONTHS PROVIDED BY ASSOCIATED CONSULTANTS:</b>
Start date: January 1999 Completion date: December 2002	N/A
<b>NAME OF ASSOCIATED CONSULTANTS, IF ANY:</b>	<b>NAME OF SENIOR PROFESSIONAL STAFF OF YOUR FIRM INVOLVED AND FUNCTIONS PERFORMED:</b>
N/A	Glen J Gibson – Engineer Hena Badira – Engineer Cecil Siuta – Engineer Simon Tamara – Engineer Vanama Kilaverave – Engineer John Kone – Senior Technician

### NARRATIVE DESCRIPTION OF PROJECT:

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Summary of actual costs for the Agence Francaise de Developpement (AFD) Project:

Phase	Actual Cost
Investigations	VUV 11.2M
Evaluation, design, and supervision Malekula and South Santo	VUV 20.3M
Civil works Malekula and South Santo - Three (3) low level bridges on the Boutnerip river in Malekula and on the rivers of Adsone and Wailapa in South Santo.	VUV 261M

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Detailed scope included design documentation, tender, contract administration / inspection services, for three (3) low level bridges on the Boutnerip river in Malekula and on the rivers of Adsone and Wailapa in South Santo.

Detailed services included engineering design, tendering, contract administration, management and supervision of the 3 bridges.

**DESCRIPTION OF ACTUAL SERVICES PROVIDED BY YOUR STAFF WITHIN THE ASSIGNMENT:**

**Specific Scope of Services included:**

- To design and supervise the installation of 3 new low-level bridges
- To investigate different technology options and prepare detailed designs
- To investigate and prepare the optimal design
- To provide adequate capacity and safety

**Design Services**

- Consultant should make use as much as possible of any previous and updated existing information that the Client is subsequently able to provide.
- There must be certain programming stages consisting of economic analysis, survey, initial site investigation and bridge investigation, gather service information, preparation of base plan, preliminary layouts with road markings, general arrangements, and initial cost estimates.
- Additional next steps and tasks consists of further geotechnical investigation, detailed design, proving of underground services, Bills of Quantities and cost estimates.
- Final design and tender documentation
- Allowance for hold point for Client review and comment.
- Carry out adequate but sufficient site investigations and tests performed to ensure the adequacy of foundation designs and road pavement designs and to confirm that technical specifications are suited to the properties of local material sources.
- Undertake a detailed survey with sufficient field survey measurements to enable accurate delineation of proposed road alignment and reserve boundaries
- Investigate and prepare detailed hydrological investigations, design to resolve or provide improvements

**Supervision Services**

To monitor, audit and perform independent testing to verify the processes and systems put in place by the Contractor complies with the required standards in accordance with the specifications.

The consultancy supervision services to be provided under this contract shall include the following:

- Provision of a suitably-qualified and experienced engineer who is capable of carrying out the duties of Project Manager Representative.
- Familiarisation with the contract documents, and the Contractor’s methodology with particular attention to the pavement rehabilitation design and construction methodology. Seek additional information on methodology, as may become necessary during the execution of the works.
- Establishment of a positive and amicable liaison with the construction contractor.
- Regular site visits and overview of progress, with particular attention to ensuring contractors’ adherence to the design and construction drawings and Specifications. Maintain records of the activities on the site, site conditions and Contractor’s resources.
- Review and comment upon the Contractor’s Works Program
- Weekly visits to any off-site works compounds to ensure all matters relating to off-site fabrication and materials handling and storage etc., are in accordance with best industry practice, the design and construction drawings and Specifications.
- Random, scrutiny of the contractors’ daily records, material testing results, batch records, set-out survey records etc and report to the Client.
- Advise the Client of matters of concern
- Prepare monthly supervision reports with support photos for the Project Manager on behalf of the Client, Project Component Manager and the Project Management Unit.
- Conduct formal Site Meetings with the Contractor and keep Minutes of matters of concern.
- Guide the contractor on critical elements of construction, including but not limited to:
  - o Interpretation of technical specifications
  - o Matters relating to worksite safety and traffic management
  - o Construction methodology
- Measure the actual quantities of work carried out and agree these with the Contractor. Keep appropriate records of measured work.
- Receipt and checking of contractor’s Monthly Statements, preparation of Interim Payment Certificates in the format prescribed in the contract and forwarding to the client in a timely manner for due payment etc.
- Confirm that substantial completion has been reached, and advise the Project Manager in writing accordingly.