



# The Project for the Urgent Rehabilitation of Markham Bridge



## 1. Project Location

Markham Bridge is located on the Wau road which connects the major towns in Molobe Province such as Blolo, Wau and Lae, the second most populated town in Papua New Guinea (Hereinafter refer to as PNG). Over 200,000 local people who live in the area depend on the road for transport to Lae. The road is used for the transportation of local products from the area such as coffee, timber and gold.



**Project Location Map**

## 2. Project Background and Objective

Markham Bridge is the longest bridge in PNG. The bridge was constructed 30 years ago. The existing bridge was damaged on the approach road on the Lae side and the abutment and the piers were damaged by the flood in March 2004. The Government of PNG carried out repairs to the damaged areas, however the foundation of pier No.3 subsided due to scouring by flood water and the foundation is likely to subside again in future floods.

The approach road on the Lae side was washed away by the flood in March 2004 and the traffic on the bridge was maintained by a temporary bridge which was constructed in August 2004. The project of reinforcing of piers No1 to No. 4 were carried out in August 2004 to avoid the failure of the bridge. The repairs for the approach road and the bank protection were carried out by AusAID in June 2006 and the temporary bridge was removed. These repair and reinforcing works were carried out as an emergency measure to maintain the traffic flow but more substantial measures are needed.

The objectives of the project are to maintain the essential functions of the existing bridge for several decades by the repair or strengthening of the abutment and piers of the bridge and the approach road and carrying out bank protection works.



**Strengthening Piers No1 to No4**



**Condition of Pier No3**



**Lae side Bank Protection**

### 3. Project Outline

The original request from the government of PNG for the Project was to reconstruct the Markham Bridge, however through meetings with the preliminary survey team from Japan and the Government of PNG, it was agreed to repair the existing bridge. The contents of the request from the Government of PNG, modified by the survey results by the preliminary survey team and agreed by the both party are as follows:

Item	Content	Note
1) Lae side revetment work	Construct new steel sheet pile foundation (73.2m) Connect blocks	
2) Repair of abutment on Lae side	Install concrete footing and steel pipe pile for abutment	
3) Reconstruction of 4 piers on the Lae side	Remove the existing piers and construct a new piers	
4) Super structure	Repaint steel girder and repair a part of railing and guardrail, repaint all of railing and guardrail	Bridge length 560m
5) Approach road on the Lae side	Total road length 50m (pavement, slope protection, drain work)	

### 4. Environmental and Social Considerations

Restoring and Rehabilitating works on roads and bridges are not mentioned in the latest environmental license system of Papua New Guinea although a new project on the national roads is classified as Level 2 which needs to acquire the approval of the environmental management plan for the project. Therefore, this rehabilitation project on Markham Bridge is categorized into Level 1 which does not need to obtain the approval. Likewise, as the result of the preliminary study, this project is specified as Category C of JICA Guidelines for Environmental and social Considerations. The Category C means that the project gives little deleterious effect to the region and the residents.

### 5. Implementation Policy

The following items shall be taken into consideration when implementing the project using grant aid.

- 1) Establish a close liaison between the Government of PNG, the consultants and the contractors for the smooth implementation of the project.
- 2) Establish a stakeholder committee with the cooperation of the Department of Works (DOW), the provincial government and the police to obtain consent by the local people and promote communication with local people and societies.
- 3) Increase job opportunities and promote technical transfer in order to activate the local economy for the population and the local industries.
- 4) Establish a construction schedule taking into consideration the precipitation.
- 5) Safety measures shall be established corresponding to the security condition of PNG.



*We sincerely hope that the project will contribute the development and stability of Papua New Guinea.*



Consulted by

