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Inspection of the Source of the Nile Bridge

Mark de Melo

mark.de-melo@arup.com

Arup

Birmingham, United Kingdom

Diana Ciurte

diana.ciurte@arup.com

Arup

Birmingham, United Kingdom

Kulvinder Rayat

kulvinder.rayat@arup.com

Arup

Birmingham, United Kingdom

ABSTRACT

This paper describes the methodology used to inspect the Source of the Nile Bridge in Uganda. It is a 525m cable-stayed bridge opened to traffic in October 2018. It replaces the existing Nalubaale Dam/Bridge as the major crossing point across the River Nile at Jinja in the Eastern Region of Uganda. Arup, working for the Uganda National Roads Authority (UNRA), carried out a visual inspection of the Source of the Nile Bridge as part of the handover. The inspection methodology involved using a bespoke web application accessed from a smartphone to record the visual inspection. The app enabled successful completion of the inspection in a limited time frame and following strict client standards for data collection and reporting of condition. Observations and records were stored in a database hosted in the cloud. This enabled results to be summarised and presented using a cloud-based web interface employing tables and dashboards. The outcome was an intuitive interface which offers an opportunity for continual monitoring of the structures condition over its lifetime.

Keywords: Inspections, maintenance, cable-stay bridges, digital, GIS.

1 INTRODUCTION

1.1 Overview

The Source of the Nile Bridge was opened to traffic in October 2018. It replaces the existing Nalubaale Dam/Bridge as the major crossing point across the River Nile at Jinja in Uganda. It is a vital link to the seaport of Mombasa, Kenya for neighbouring countries such as Rwanda, Burundi, the Eastern Democratic Republic of Congo, and Southern Sudan. The Source of the Nile Bridge will serve an integral role in the country's development. It is expected to carry a significant proportion of Uganda's volume of trade by road to and from the seaport of Mombasa in Kenya, through Malaba and Busia. For these reasons, the optimal functionality and performance of the Source of the Nile Bridge is of great importance.