



## Temburong Bridge, Brunei – Design of CC1 Tunnels and Bridges in Mentiri

Steve Kite, Murphy To, Florent Desaintpaul, Naeem Hussain, William Leung

Arup, Hong Kong

Kok Kong Chin

Ove Arup dan Rakan Rakan, Brunei Darussalam

Contact: [steve.kite@arup.com](mailto:steve.kite@arup.com)

### Abstract

The new 30 km Cadangan Projek Jambatan Temburong (Temburong Bridge Project) in Brunei will connect the relatively isolated district of Temburong with the more developed Brunei-Muara district. The project includes approximately 3.6 km in Brunei-Muara district where the new road will pass through the Mentiri hills. This section will be built under Construction Contract CC1 and includes 3 twin-bore lengths of tunnel and various bridge structures. Design is to Eurocode.

The tunnels are in hard soils / weak rock and will be the first mined tunnels to be built in Brunei. The tunnel portals incorporate Islamic shapes to continue the architectural theme of the project.

Bridges will link the different tunnels together and form the free-flow connections to an existing dual carriageway at the north-west end of the scheme.

**Keywords:** Brunei, bored tunnels, box girder bridge, twin ribbed deck bridge, Eurocodes.

### 1 Introduction

Temburong District is isolated from the rest of Brunei by the Brunei Bay to the north, and Malaysian state of Sarawak to the south, east and west. The Cadangan Projek Jambatan Temburong (Temburong Bridge Project) will provide a fixed road link to connect Temburong to the Brunei-Muara district. Following completion of the Feasibility Study [1] for the 30 km long project (Figure 1), the works were divided into several construction packages [2]. Approximately 3.6 km of the route is in Brunei-Muara district where the route passes through the Mentiri Hills to connect to an existing dual carriageway at Jalan Utama Mentiri. The planning and design of the required tunnels and bridges has had to address difficult access and challenging ground conditions due to the soft material present.

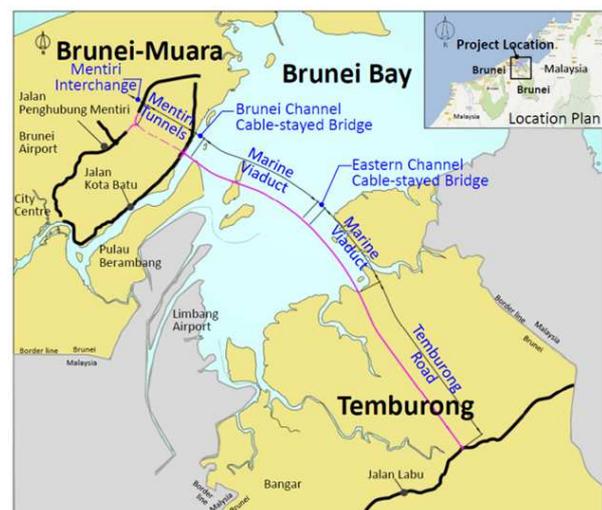


Fig. 1. Layout Plan of Temburong Bridge Project