



## V&A Exhibition Road Building – Maximising opportunities and minimising risk via sophisticated analysis and pragmatic collaboration

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### Abstract

The V&A Exhibition Road development will create a gallery, public courtyard and entrance into the V&A museum in central London and will be a new home for the museum’s temporary exhibitions. The constrained site is surrounded by three historic listed buildings. A new 15m deep underground structure has been created between and under the buildings. A deep steel “folded plate” structure spans 36 metres across the full width of the site to provide a double height column free gallery space. Above the gallery a public courtyard has been created, providing a new entrance to the V&A from Exhibition Road. The Arup design married pragmatic analysis of the physical site constraints and buildability issues with a highly detailed analysis of the complex design and construction issues of both the basement and the roof. This reduced the risk to the existing structures and allowed us to exploit the site to its full potential.

**Keywords:** Basement construction, long span steelwork, existing buildings, structural optimisation

### 1 Introduction

The V&A Exhibition Road development will create a gallery, public courtyard and entrance into the V&A museum in central London and will be a new home for the museum’s temporary exhibitions. The constrained site is surrounded by three historic listed buildings. A new 15m deep underground structure has been created between and, in part, under the buildings for the exhibition and art handling facilities. A deep steel “folded plate” structure spans 36 metres across the full width of the site to provide a double height column free gallery space. Above the gallery a public courtyard is created, providing a new entrance to the V&A from Exhibition Road.

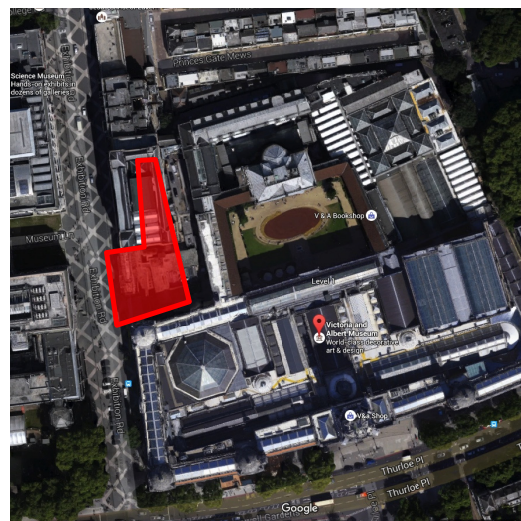


Figure 1 The Site (copyright Google maps)