



the  
UNIVERSITY  
of  
GREENWICH

**EXAMINATION PAPER:**            **ACADEMIC SESSION 2006/2007**

**Campus**                                **Avery Hill**

**School**                                 **Architecture and Construction**

**Title of Programme:**                **BSc (Hons) Real Estate**  
   **BSc (Hons) Construction Business Management**  
   **BSc (Hons) Construction Surveying Management**

**Course Code:**                        **BUIL1031**

**Course Title:**                        **Applications 3**

**Level:**                                 **3**

**Duration:**                            **3 hours**

**Date:**                                 **15<sup>th</sup> May 2007**  
   **Start time 9.30 am**

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**Candidates must comply with the ‘Instructions to Candidates’ printed on the examination answer book.**

**Answer FOUR questions in total.**

All questions carry equal marks.

## Scenario:

A developer is preparing proposals for a confined redevelopment site in a city centre location. The site is in a Conservation Area and the building on it has served as a hospital for the last 100 years. Originally constructed in 1760, the building is not listed but its façade is of historic interest to conservationists. The existing building is constructed from loadbearing masonry and has timber floors. The site's location and confined nature means that vehicular access during construction will be very limited.

The local authority development plan identifies redevelopment potential on the site for a combination of commercial and residential uses. The developer's proposals conform broadly to these requirements and include a six storey framed structure with a contingency for retaining the façade of the existing building and integrating this into the redevelopment. Due to various planning related issues the commencement of construction will be delayed but the planned completion date cannot be altered and speed of construction is now seen as a priority. Survey reports indicate that over most of the site soil conditions are approximately 20 metres of non-shrinkable clay overlying solid chalk. The water table lies approximately 15 metres below the surface of the ground.

1. Discuss the key factors that the developer will need to consider when proposing methods for demolishing the existing building and clearing the site ready for a soil investigation, outlining an appropriate method of demolition.
2. Critically discuss a strategy suitable for investigating the ground conditions on the cleared site and from the information given detail the various hazards that could be revealed by a site investigation on a site such as this.
3. Discuss the key factors that the developer will need to consider when selecting an appropriate form of substructure for the proposed development.
4. Compare and contrast the options for constructing the building's superstructure, including the floors of the building.

5. Discuss an overview of a procedure identifying the key issues for consideration if the façade retention proposal becomes a part of the redevelopment scheme
  
6. Discuss the key factors the developer will need to consider when proposing a method of cladding the building and explain the advantages and disadvantages of appropriate methods.