

UNIVERSITY OF BOLTON

**SCHOOL OF THE BUILT ENVIRONMENT &
ENGINEERING**

BSc(HONS) ARCHITECTURAL TECHNOLOGY
**BSc(HONS) BUILDING SURVEYING & PROPERTY
MANAGEMENT**

BSc(HONS) CONSTRUCTION
BSc(HONS) CONSTRUCTION MANAGEMENT

**BSc(HONS) QUANTITY SURVEYING &
COMMERCIAL MANAGEMENT**
**BA(HONS) PROPERTY DEVELOPMENT & DESIGN
FOR INTERIORS**

SEMESTER ONE EXAMINATION 2010/2011

CONSTRUCTION TECHNOLOGY

MODULE NO: BLT 3005

Date: Thursday 20 January 2011

Time: 10.00 am – 12.00 noon

INSTRUCTIONS TO CANDIDATES:

There are THREE questions.

Answer ANY TWO questions only.

All questions carry equal marks.

Marks for parts of questions are shown
in brackets.

Answers should include reference to relevant aspects of health and safety
in construction and also clear well-annotated sketches if appropriate.

School of the Built Environment & Engineering
BSc(Hons) AT/BSPM/CON/CM/QSCM/PDI
Semester One Examination 2010/2011
Construction Technology
Module No. BLT 3005

1. You have been employed as a consultant by a client who owns a former industrial site, where the main contaminants are known to be heavy fuel oils and volatile organic compounds (VOCs). Your role is to give advice as to whether they should sell the site as it stands or to attempt to clean up the site and then sell it. The current market for the land would be the private housing sector and it has been re-designated by the local authority in their Unitary Plan; as it could be a very desirable location now the industrial processes have ended. The ground is known to be mainly mixed granular material for a depth of approximately 5.75 m to 7.50 over the site and this granular layer overlies a deep dense clay layer over 20.00 m deep.

Evaluate your client's options in both scenarios: (i) selling the site as is or (ii) cleaning up the site to the levels required to be able to sell to a Private House Builder without any of the former industrial past being a hindrance to future house sales.

50 marks

2. There are many alternative natural technologies that are being rediscovered and/or developed in order to produce low carbon dwellings.

Detail two of these alternative technologies that could be used in either the mass or self-build housing market and analyse their ecological benefits compared to brick and block construction that had become the traditional technology of home building.

50 marks

3. "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Brundtland (1987)

Discuss the relevance and accuracy of the above statement in relation to the Economic and Environmental aspects of sustainable development in both the developed and developing world.

50 marks

END OF QUESTIONS