



the
UNIVERSITY
of
GREENWICH

EXAMINATION PAPER:	ACADEMIC SESSION 2006/2007
Campus	Avery Hill
School	Architecture and Construction
Title of Programme	BSc (HONS) QUANTITY SURVEYING
Level	Undergraduate
Academic Stage of the Course	3
TITLE OF PAPER	STUDIO IIIA
COURSE CODE	BUIL 1011
Date and Time	18th May 2007 Start time 9.30 am

Answer ALL questions.

Candidates are allowed to bring an unmarked copy of 'JCT 1998 With or Without Quantities'.

Candidates must comply with the 'Directions to Candidates' printed on the examination answer book.

This examination takes the form of a practice problem entailing a number of tasks.

ALL tasks must be attempted.

The following documents are included with this paper to assist in completing the tasks set. Read each document before attempting to answer the questions asked.

Document 1 Letter from Draw and Partners to Rule and Measure

Document 2 Letter from Draw and Partners to Rule and Measure

Document 3 Letter from Draw and Partners to Rule and Measure

Document 4 Letter from Draw and Partners to Rule and Measure

Document 5 Letter from Draw and Partners to Rule and Measure

Document 6 Letter from Draw and Partners to Rule and Measure

Document 7 Letter from Draw and Partners to Rule and Measure

Sketch plan of St Luke's Primary School, Maidstone, Kent

Introduction

You are currently employed by Rule and Measure as a Consultant Quantity Surveyor on the extensive refurbishment and new build of a primary school. The primary school was constructed in 1900 and is single storey of brick construction. It is now in need of extensions and part refurbishment to provide modern facilities for the local community. The construction work entails a new single storey classroom block of 600m² which contains 4 classrooms, toilets and cloakroom areas. This is to be constructed to the rear of the playground. A new information and communication technology room (ICT) is to be built as an extension to the existing school, approximately 80m². Refurbishment works include the existing ICT room to become a staff room, the head teachers and secretary's offices are to be redecorated and the existing toilets and changing areas are to be completely refurbished. To one side of the school is an outdoor swimming pool which is in need of extensive repairs to the tiled finish, together with refurbishment of the changing areas to incorporate showering facilities. The works are all part of one contract using JCT 98 standard form with Quantities and is approximately £1.5 million in value with a contract period of 50 weeks. Liquidated and ascertained damages have been set at £1,500 per week. The contract commenced in August 2006. You are currently at week 26 of the contract; 4 weeks extension of time has already been granted for inclement weather. The swimming pool is to be used for the summer term and must therefore be ready by May 2007. The sectional completion supplement has been included in the contract documents to this effect. The remainder of the contract is due to finish in August 2007 for fitting out of the classrooms and ICT room, by others, for the autumn term starting in September 2007.

In responding to each task, you are reminded to consider the level of information likely to be available to you at the various stages of the project and to structure your answers accordingly.

- Task 1** Discuss the most appropriate method of procurement for the redevelopment of the mobile classrooms site. (See Document 1)
(13 marks)
- Task 2** Discuss the discovery of the ancient burial ground. What procedure must be undertaken before excavations re-commence and what affect is this discovery likely to have on the development as a whole? (See Document 2)
(13 marks)
- Task 3** Consider the (possible) liability of the School and how existing insurances might be involved. (See Document 3)
(13 marks)
- Task 4** Discuss the validity of the contractor's claim for extension of time and loss and expense. Comment on the effect these may have on the development as a whole and how the handover date of 1st August 2007 can be achieved. (See Document 4)
(22 marks)
- Task 5** Discuss the procedure for the hand over of the swimming pool on 1st May 2007 and the implications for all parties if this is not achieved. (see Document 5)
(13 marks)
- Task 6** Discuss the insolvency situation in Document 6. What advice would you give Draw and Partners regarding the predicament of the main contractor? (See Document 6)
(13 marks)
- Task 7** Discuss the advice you would give as to whom is liable for the damage to the raised access floor and what remedies are available. (See Document 7)
(13 marks)

Document 1

**DRAW AND PARTNERS
ARCHITECTS AND TOWN PLANNERS
Out House
Old Street
Dartford
DA1 2SZ**

Rule and Measure
2006

Dec

Chartered Quantity Surveyors
20 West Street
Dartford

Dear Mr Partner

RE: ST LUKE'S PRIMARY SCHOOL, MAIDSTONE, KENT

Further to our meeting with the school governors, we can advise you that our mutual client has decided to redevelop the mobile classrooms site. This will necessitate demolition of the existing three mobile classrooms. Reinstatement will include a new brick built building to house the library including a seating area for the children to read and have story telling classes. We expect some form of soft and hard landscaping around the building to be incorporated. The floor area is anticipated to be 150 m² and the estimated value, as previously advised by yourselves, is £600,000. For future reference this construction work will be referred to as the 'library site'.

The client wishes the work to run concurrently with the main project which is presently halfway through. The work cannot exceed the budget price as funds are limited.

We would appreciate your views on the most appropriate method or methods of procuring this work with your recommendation.

Yours sincerely,

A.R. Draw

Document 2

**DRAW AND PARTNERS
ARCHITECTS AND TOWN PLANNERS
Out House
Old Street
Dartford
DA1 2SZ**

BY FACSIMILE

Rule and Measure
Chartered Quantity Surveyors
20 West Street
Dartford

Jan 2007

Dear Mr Partner

RE: ST LUKE'S PRIMARY SCHOOL, MAIDSTONE, KENT

Following our telephone conversation yesterday I write to confirm the events that took place on site. As you are aware we have proceeded with the 'library site'.

Whilst excavating the 'library site' the contractor discovered a number of skeletal bones. On telephoning the local council it appears that the library building could be positioned over an ancient burial site and that investigations need to be carried out to ascertain this before excavations re-commence.

Can you advise us as to the procedure that would normally be involved and the likely outcome? Will this affect the construction works and the programme?

We look forward to hearing from you.

Yours sincerely,

A. Hope

Document 3

**DRAW AND PARTNERS
ARCHITECTS AND TOWN PLANNERS
Out House
Old Street
Dartford
DA1 2SZ**

BY FACSIMILE

Rule and Measure
Chartered Quantity Surveyors
20 West Street
Dartford

Feb 2007

Dear Mr Partner

RE: ST LUKE'S PRIMARY SCHOOL, MAIDSTONE, KENT

We write to ask your advice on the following incident:-

One of the school children trespassed onto the 'library' site, during school hours and was seriously injured when he fell down an excavation hole. The parents of the school child are now intending to sue the school.

Consider the (possible) liability of the School and how existing insurances might be involved on you5r chosen procurement route for this part of the development.

We look forward to hearing from you.

Yours sincerely,

B. Hope

Document 4

18th May 2007

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STUDIO 3A (QS)
Course code: BUIL 1011
CRN Number

**DRAW AND PARTNERS
ARCHITECTS AND TOWN PLANNERS
Out House
Old Street
Dartford
DA1 2**

Rule and Measure
Chartered Quantity Surveyors
20 West Street
Dartford

March 2007

Dear Mr Partner

RE: ST LUKE'S PRIMARY SCHOOL, MAIDSTONE, KENT

We have received notification from the contractor of further delays on the above contract which we are passing on to you for comment and assessment.

The contractor has notified the following incidents that occurred in January and February:

- a. Piling of classroom site held up for 1 day due to the Building Inspector not approving installation of 2 piles. Both piles dug out and reconstructed resulting in a delay of one week.
- b. Whilst the ground floor to the classroom site was being cast freezing temperature held up the work for 3 days.
- c. Brickwork at low level on the classroom block condemned by Architect. A section of 6m² taken down and rebuilt causing a delay of 2 days.

The contractor is anticipating a claim of 2 weeks for the above incidents together with full preliminary costs.

Could you please advise whether these incidents give rise to a claim for extension of time and loss and expense and if there is likely to be any effect to the programme. The client is quite concerned that four weeks extension of time has already been granted and now further delays are anticipated. We were originally hopeful that the delay could be recovered but this now appears unlikely. However, as it is imperative that the school is ready for handover on August 1st 2007 can you advise the client what means are available for making up the lost time so that the August deadline can be achieved?

We look forward to hearing from you.

Yours sincerely,

A R Draw

Document 5

**DRAW AND PARTNERS
ARCHITECTS AND TOWN PLANNERS
Out House
Old Street
Dartford
DA1 2SZ**

Rule and Measure
Chartered Quantity Surveyors
20 West Street
Dartford

April 2007

Dear Mr Partner

RE: ST LUKE'S PRIMARY SCHOOL, MAIDSTONE, KENT

We have been approached by our client for clarification as to the situation concerning the swimming pool.

The swimming pool is due to be handed over on 1st May 2007 to enable school use in the summer term. It has come to our attention that not much work has been carried out to date although the contractors programme indicates that the work should be well under way at this stage.

The client wishes to know what the procedure entails for handover of the pool on the 1st May and also the implications for both the school and the contractor if the handover is not achieved by the set date.

We look forward to hearing from you.

Yours sincerely,

C. Hope

Document 6

**DRAW AND PARTNERS
ARCHITECTS AND TOWN PLANNERS
Out House
Old Street
Dartford
DA1 2SZ**

Rule and Measure
Chartered Quantity Surveyors
20 West Street
Dartford

May 2007

Dear Mr Partner

RE: ST LUKE'S PRIMARY SCHOOL, MAIDSTONE, KENT

We have been advised by the main contractor that the domestic sub-contractor for the stonework arches to the windows on the classroom block has become insolvent. To replace this sub-contractor is likely to take approximately 12 weeks due to the specialist nature of this work and the new sub-contract price will be 35% higher than that previously tendered.

We would appreciate your advice on this situation and the remedies available to the contractor.

We would also be interested to know what happens to retention monies in this situation.

We look forward to hearing from you.

Yours sincerely,

A R Draw

Document 7

**DRAW AND PARTNERS
ARCHITECTS AND TOWN PLANNERS
Out House
Old Street
Dartford
DA1 2SZ**

Rule and Measure
2008
Chartered Quantity Surveyors
20 West Street
Dartford

January

Dear Mr Partner

RE: ST LUKE'S PRIMARY SCHOOL, MAIDSTONE, KENT

We have been informed by the school governors that problems have been encountered with the raised floor in the ICT room.

The flooring is warping making the surface uneven and dangerous for the children. The problem appeared in the Christmas vacation when the school was unoccupied. We are currently in the defects liability period, 16 weeks after practical completion.

We would appreciate your advice on who is liable for this damage and what course of action we should take.

We note from our records that we are holding £35,000 in retention monies.

We look forward to hearing from you.

Yours sincerely,

A R Draw

St Lukes Primary School, Mandstorne Kent.
Site Plan (NTS).

