

## SAMPLE ASSIGNMENT BRIEF

### UNIT 3 - DESIGN THE BUILT ENVIRONMENT: APPLYING DESIGN PRINCIPLES



## **Construction and the Built Environment Higher (Level 2) Unit 3 Design the built environment: applying design principles (CBE2U3)**

### **Sample Assignment Brief (Approximately eighteen hours under controlled conditions)**

#### **Introduction**

The purpose of this unit is to explore the application of design principles. You will apply your knowledge by designing a complex and multiple use single storey structure. The unit also concentrates on the career opportunities available in the design and planning of the built environment, the qualifications needed for progression, and the role of the associated Professional Institutions.

This unit, alongside the others within the Level 2 Principal Learning in Construction and the Built Environment, has been designed to allow you the opportunity to develop a range of Personal, Learning and Thinking Skills (PLTS), and to demonstrate these on more than one occasion. This approach will allow you to build towards a full range of PLTS.

#### **Learning Outcomes:**

- 1 To understand and be able to apply the design principles which affect the design of a complex single storey structure
- 2 To know how to plan a career in design and planning.

#### **Assignment brief**

You will be expected to spend no more than **18 hours** on this internally assessed assignment.

Marking of the assessment will be determined by the criteria set out on the assessment grid. The unit is assessed through this centre set and marked assignment. Internal assessments are subject to moderation by our awarding body which is: AQA-City & Guilds.

Your assignment report should be a word processed A4 document and will be included in your portfolio. Photographs and other images to support your work may be included in your assignment report. Any drawings or sketches you wish to include should be no larger than A3 sheets. You may use the opinions and judgments of construction professionals such as Architects, Town Planners and other designers and planners to support and provide case studies for your work.

Each page of your portfolio should be numbered and include the following information:

- candidate name; candidate number; centre name and centre number.

You should concentrate your efforts on these requirements in order to help maximise your final marks for this unit. When you work in teams you should clearly identify your own contributions.

### **Assignment Task:**

#### **The assignment task is in two parts**

##### **Part A**

Apply design principles to the design of a complex and multiple use single storey structure

##### **Part B**

Explore career opportunities within the field of construction design

#### **Evidence requirements**

In this assignment, you will:

##### **Part A**

Through your assignment produce evidence of where you have met the assessment criteria including:

- 1 a realistic design for a complex and multiple use single storey structure, using basic construction design drawing techniques, with evidence of team work shown through witness testimonies,
- 2 other written material including an explanation of any buildability issues that arose during the design process together with material specifications, minutes of meetings and discussions, and records of design critiques

##### **Part B**

- 3 a career development plan showing opportunities and progression routes available in the design of the built environment.

In order to attain a high mark in this unit, you should address all of the above. It may, however, be possible to achieve a pass mark without producing every one of the evidence requirements. A table showing how the assessment topics are weighted is included below, and you should understand this in order to understand how the final mark will be determined.

### Weighting of assessment criteria topics

Assessment criteria topic	Weighting	Marks
1 Design principles for the design of a complex structure	87.5%	42
2 Career opportunities within construction design	12.5%	6
<b>Total</b>	<b>100%</b>	<b>48</b>

### Assignment structure

A suggested assignment structure, which will allow you to meet the evidence requirements, is given below:

#### Part A

To support the requirements of the unit it might be based upon the design of a small to medium sized, single-storey structure with foundations, ground floor, walls, windows, doors and roof. The building or structure may have more than one intended function and the final design solution should be based upon a range of increasingly acceptable design solutions that address a range of issues including disabled access; how the building or structure fits in with its surroundings; provision of natural light and ventilation; the impact of the building or structure on the natural environment; the use of space (including circulation space); the relative positions of kitchen and bathroom; and other issues associated with where the primary services utilities enter and leave the building.

- Employ standard design techniques to design a complex and multiple use structure, using a sustainable approach throughout.
- Consider 'buildability' at all stages of the design in terms of the intended function of the building and any issues associated with its construction.
- Produce and include intermediate design solutions, material specifications and other documentation as appropriate, together with evidence of a team approach to the different stages of the improvement of the design, such as notes and minutes of discussions with other learners and advice given regarding the early design decisions by your teacher and any visiting design and planning professionals.

#### Part B

You should prepare a career development plan for careers in the design and planning of the built environment, including information on the training and qualifications needed to support progressive career development into a relevant professional institution.

- Select two careers in the design sector, one at technician level and the other a professional manager. In each case, identify and describe the job roles and responsibilities involved, and suggest ways in which individuals can plan their career development within the sector. Include details of entry and membership requirements to the appropriate professional institutions.

A suitable period of reflection should follow upon completion of the assessment for this unit. You should evaluate what was good about your design, what was less good and how you might improve the design if you were to complete the assessment again. The learning and assessment that comprise this unit could then be used to support study at a higher level; in particular:

Level 3 Unit 1: Design the built environment: design factors;

Level 3 Unit 2: Design the built environment: stages in the design and planning process;

Level 3 Unit 3: Design the built environment: physical and environmental influences.

## Assessment grid

Assessment criteria topic	Band 1	Band 2	Band 3
	The learner has:		
<b>1 Design principles for the design of a complex structure</b>	<p><b>0 – 14 marks</b></p> <p>Demonstrated a basic understanding of design principles by using a limited range of such principles, within a team approach, to design a complex structure.</p> <p>Produced a design for a complex structure, which demonstrates some evidence of having addressed sustainability and buildability issues.</p>	<p><b>15 – 28 marks</b></p> <p>Demonstrated a partial understanding of design principles by using a wide range of such principles, within a team approach, to design a complex structure.</p> <p>Produced a design for a complex structure, which demonstrates clear evidence of having addressed sustainability and buildability issues.</p>	<p><b>29 – 42 marks</b></p> <p>Demonstrated an in-depth understanding of design principles by using a comprehensive range of such principles, within a team approach, to design a complex structure.</p> <p>Produced a design for a complex structure, which demonstrates detailed and in-depth evidence of having addressed sustainability and buildability issues.</p>
<b>2 Career opportunities within construction design</b>	<p><b>0 – 2 marks</b></p> <p>Produced a basic plan to support individual career progression, up to professional level.</p>	<p><b>3 – 4 marks</b></p> <p>Produced a clear and coherent plan to support individual career progression, up to professional level.</p>	<p><b>5 – 6 marks</b></p> <p>Produced a precise and thoughtful plan to support individual career progression, up to professional level.</p>

## **Personal, Learning and Thinking Skills (PLTS)**

The list below is indicative of the way this unit supports the development of PLTS, as opposed to the achievement of PLTS that are possible through the assessment. The unit supports the development of more PLTS than are covered through the assessment criteria alone. Alternative approaches could be selected.

### **Independent enquirers**

- planning and carrying out research into simple designs using key development factors
- exploring issues from different perspectives by seeking feedback from their peer group
- analysing and evaluating information to inform alternative design solutions
- using reasoned arguments and quantitative evidence to propose a final design solution

### **Creative thinkers**

- generating ideas and exploring possibilities when considering alternative design solutions
- questioning their own and others' assumptions when attempting to balance the benefits of sustainable construction designs against initial costs

### **Reflective learners**

- setting themselves targets and goals in the production of any sketches, drawings, schedules and specifications associated with the production of each design solution
- monitoring and reviewing their progress towards targets and goals in the production of any sketches, drawings, schedules and specifications associated with each design solution

### **Team workers**

- working with others towards common goals when sharing information relating to performance of construction materials and 'buildability' of each design solution

### **Self-managers**

- organising their time and resources to achieve targets and goals when completing the internally-set assignment
- proposing practical and manageable ways forward to a small group after feedback from the teacher on progress with the internal assignment

### **Effective participators**

- identifying possible improvements to the methods used to implement the design
- contributing constructively to group discussions and debates.