

SAMPLE ASSESSMENT MATERIAL

UNIT 1 - DESIGN THE BUILT ENVIRONMENT: THE DESIGN PROCESS



This example assignment has been developed by AQA-City & Guilds as part of a QCDA funded project and has been reviewed by practitioners, representatives of sector and awarding organisations and QCDA.



Qualifications
and Curriculum
Development
Agency

Construction and the Built Environment

Higher Diploma (Level 2) Unit 1 - (CBE2U1)

Design the built environment: the design process

Internal Sample Assessment Material (iSAM)

Information for teachers

This assignment is provided as an example only. Consortia should produce their own assignments in line with the assessment section of the unit, based on their local delivery circumstances.

Controlled assessment

Aspect		Level of control
1	Task setting	Limited
2	Task taking	
	a Time	Limited
	b Resources	Medium
	c Supervision	Medium
d	Collaboration	Medium
3	Task marking	Medium

A limited level of control means that consortia have control of the assessment process, within the guidance set out by AQA - City & Guilds in the unit specification. This implies that the consortium can alter the internal sample assessment materials (iSAMs), in accordance with the guidance provided in the unit specification, to take account of local delivery circumstances.

A medium level of control means that the parameters for that area are more closely controlled by AQA - City & Guilds and that there are limits to the changes that can be made to the assessment materials by consortia. These limits are made clear in the appropriate guidance.

Task setting: limited level of control

Consortia should feel free to adapt the iSAM to take into account local delivery circumstances, but must ensure that the assignment briefs:

- address the learning outcomes and assessment criteria set out in the unit specification
- follow the guidance contained in the 'Assessment' section of the unit specification
- require the learner to produce evidence in the form specified in the 'Evidence requirements' section of the unit specification
- are structured in the form specified in the 'Assignment structure' section of the unit specification
- are internally moderated by the domain assessor, with all suggested amendments and corrections made prior to issue.

Where consortia take up the opportunity to adapt the exemplar assignment material to suit their local delivery circumstances, they must be careful to use a project of a similar size and complexity in order to ensure that the scope and level of challenge remain the same. Where no suitable construction project is available locally, it is permissible for the centre to devise a virtual project as a basis for the assessment for the unit. It is however important that any adapted assignment brief, whether based on a real or a virtual construction project, allows the learners to address all of the set tasks in such a way that they have a clear opportunity to achieve each of the assessment criteria in the unit.

Task taking: limited (time) or medium (all others) level of control

Consortia may make limited changes to the iSAM but these must be within the following parameters as specified either in the unit specification or the overall qualification specification.

Time

18 of the 60 Guided Learning Hours (GLH) available for the delivery and assessment of this unit should be dedicated to production of the assessment evidence by the learner. A maximum of three extra hours may be added for individual learners at the discretion of the consortium. This assignment comprises four tasks, successful completion of which will allow the learner to address all of the four learning outcomes, each of which has a weighting of 25% of the unit. It follows that each learning outcome should be given 18 GLH of delivery time and that 4.5 hours of this time should be dedicated to the controlled assessment time for each task.

Resources

Learners will require access to pre-prepared design sketches, drawings, schedules and specifications of all kinds, manual drawing equipment, digital cameras and ICT equipment with internet access. There are no constraints on the resources that may be used, but the above should be provided as a minimum.

Supervision

Learners may research information for the project in any place and at any time, but the process of compiling the report on the design process, making a graphical representation of the design cycle and producing the folder of supplementary technical evidence, must take place under the supervision of the assessor within the 18 hours allocated for assessment. This applies to all of the tasks that comprise the assessment for this unit.

Collaboration

Learners may work in groups when producing and interpreting drawings, schedules and specifications to support their exploration of the design cycle. Team working is a requirement of assessment criterion 3c and is associated with PLTS TW1 and TW2. Good practice in the use of team work should involve learners in discussion of the work done by other members of the team in the contrasting roles of designer and planner. A useful size for a team would be four to six learners, in order to ensure that each learner has a chance to contribute to the team work requirement. Team working is not associated with learning outcomes 1, 2 and 4 or with assessment criteria 1a, 2a, 2b, 3a, 3b or 4a. Any evidence submitted for assessment must of course be authenticated as the learner's own work, by both the teacher and the learner.

Task marking: medium level of control

Assessors must use the 'best fit' method to assess the learners' work. This means that they must follow the three 'bands' provided in the assessment grid included in the unit. Assessors are however free to interpret the assessment grid in terms of the local delivery and assessment issues noted in the 'task setting' section above.

Consortia should ensure that, where there are two or more assessors for the unit, standardisation meetings take place to ensure that every assessor is assessing to the same standard. It is good practice for each assessor to assess five to ten assignments (depending upon the total number of assignments to be assessed) in pencil, prior to the standardisation meeting. Discussions at the meeting should focus upon resolution of any different interpretations of the marking scheme, consideration of unexpected but apparently acceptable responses to the set tasks, and agreement of an agreed, unified mark scheme to be followed thereafter by all assessors. Those assignments that were assessed in pencil before the meeting, should then be reassessed in pen, using the agreed mark scheme.

Consortia must also ensure that, even where there is only one assessor for the unit, the domain assessor samples all assessment decisions made, as part of the internal moderation process.

Assessors are encouraged to provide feedback at intermediate stages of the evidence production in the form of progress reviews. They should not however comment on the marks achieved at intermediate stages, nor should they provide any specific direction or detail on how the portfolio of evidence could be improved. During progress reviews assessors must confine themselves to pointing out those tasks that have yet to be addressed properly and should therefore confine themselves to a general narrative only. Two progress reviews are suggested as being manageable and the learners may redraft their work after such progress reviews, but not after agreement of the final assessed mark, which will take place at the external moderator's second visit.

Assessors must discriminate between those learners who fail to complete a portfolio of evidence because of illness or indisposition, and those who simply fail to complete, for one reason or another, but without mitigation. The latter must, if they wish to complete the unit, be provided with a completely new assignment brief, and the work done previously should not count towards the mark for the retaken assignment. The former group may, assuming that the mitigating circumstances are validated, be given extra time to complete the project, or be allowed to revisit the original assignment when able. In short, resubmission of the original assignment should only be permitted where the learner was unable to complete the assignment on time due to circumstances outside his or her direct control.

Information for learners

Assignment overview

The purpose of this assignment is to explore the factors that affect the design processes associated with the development of a new local school intended to replace a school that has come to the end of its useful life. You must demonstrate an understanding of planning requirements and the impact of those requirements on the design process. You will be required to use the technical information typical of the construction and built environment sector to produce and interpret sketches, drawings, schedules and specifications. You will need to compare and contrast the methods used to provide the school with primary services utilities.

This unit, along with other units in the Higher Diploma (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). You will be provided with opportunities to demonstrate achievement of these alongside the assessment evidence for this unit. In this way you can build up a full range of PLTS.

You will be provided with access to pre-prepared design sketches, drawings, schedules and specifications of all kinds, manual drawing equipment, digital cameras and ICT equipment with internet access.

You may research information for the project in any place and at any time, but the process of compiling the report on the design process, making a graphical representation of the design cycle and producing the folder of supplementary technical evidence, must take place under the supervision of the assessor within the 18 hours allocated for assessment.

You may work in groups when producing and interpreting drawings, schedules and specifications to support your exploration of the design cycle, but any evidence submitted for assessment must be authenticated as your own work, by both the teacher and yourself.

When you have completed this unit you should:

1. know about factors that influence the design process
2. understand planning requirements and how they are applied to a wide range of different developments
3. be able to demonstrate an understanding of the technical information needed to support the design process
4. understand how the primary service utilities impact on the design process.

Weighting of assessment criteria topics

Assessment criteria topic	Weighting	Marks
1 Factors that influence the design process	25%	12
2 Planning requirements	25%	12
3 Technical information used in design	25%	12
4 Primary services utilities	25%	12
Total	100%	48

In order to attain a high mark in this unit, you should address all of the above topics. The table above shows how the assessment topics are weighted. You will need to understand this to find out how the final mark for your work will be determined.

Assignment Brief

Scenario

Your tutor will provide you with details of the proposed new school described in the memorandum below. These details will include a brief description of the proposals, plans and elevations, and a site layout drawing showing the position of mains utilities and the required service entry points. You will be acting in the role of trainee architectural technologist who is the first point of contact with the schools and their prospective construction learners. You must produce a technical report about the project focusing on how you introduced the important issues to the prospective learners.

Further important details are available in the internal memorandum shown below.

Your assignment report should be a word processed A4 document that must be included in the portfolio of evidence to be submitted for assessment by your teacher.

Photographs, and other images used to support your work, may be included in the assignment report. Should you wish to include any drawings or sketches then they must be no larger than A3 sheets. You may use the opinions and judgements of construction professionals to support your work but you must reference these carefully.

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

candidate name, candidate number, centre name, centre number.

No marks are available for work that does not address the learning outcomes and assessment criteria. You must therefore concentrate your efforts on those requirements in order to maximise your final mark for this unit.

When you work in teams you must clearly identify your own contributions.

Roles

Your teacher will take the role of the head of the school in this assignment. You will take the role of a trainee architectural technologist who has been asked to act as a link between the school and the design team. You may use any source of information that seems appropriate to you, including any advice or guidance provided by any employers and professional practitioners you have met during the delivery of this, and all other, units. You must however be careful to reference any comments or information that is not your own work. Your teacher will be the assessor for this unit and will mark your work.



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INTERNAL MEMORANDUM

To: Paul Peterson, Trainee Architectural Technologist
From: Robert Eddon, Senior Partner
Re: New school buildings on the site of the existing Bash Street School
Date: 04 November 2009

As you will know, our practice has been selected to design the new school premises that will replace the old Bash Street School, an 11 –16 school that is now deemed to be an unacceptable environment for teaching and learning. A preliminary feasibility study has concluded that the premises are not suitable for refurbishment or adaptation. The present school buildings are to be demolished and a new school built on the site of the old school. The school will move into stand-alone relocatable modular buildings for the period of the demolition and newbuild. It is anticipated that the project will cause no disruption to the pupils' education. We are not involved until demolition is complete.

The headteacher and governors of the school are committed to vocational education. They see the project as an opportunity for a selected cohort of their Year 9 learners to explore the procedures involved in the design and planning of the new school, as a precursor to following a vocational programme in construction and the built environment during Years 10 and 11. The school is looking to forge links with our practice. The intention is that we will support learners in their investigations, and teachers in the delivery of what we are assuming to be unfamiliar territory. You can provide the required support by completing a range of tasks, details of which are shown below.

Our personnel records inform us that you were a pupil at the school from 2003 to 2008 and that you still live in the catchment area for the school. The headteacher is of the opinion that the Year 9 pupils will relate well to someone nearer their own age, someone from their own locality and, more specifically, someone who went to the same school as them and who has successfully progressed into employment in the construction and built environment sector. We intend to release you for one day a week, on a day yet to be decided, so that you can provide the support that the school requires. How you do this is, up to a point, up to you, but you must liaise closely with myself, and with the teacher responsible for this part of the curriculum, Ms Kathy Gill. My secretary will provide her contact details. We will be providing guidance on the main areas of interest and all the technical information you will need.

Assignment tasks

Task 1

- (a) Identify and describe the community, social, economic, legal, environmental and infrastructural factors that will influence the design of the new school buildings.

Learning Outcome 1, Assessment Criteria 1a (i to vi), PLTS (IE5)

You should:

- allow 4h 30min to complete this task
- hand in a technical report on the above to your teacher, as part of your portfolio
- include sketches and/or images with your written work, where appropriate.

Task 2

- (a) Outline the main requirements of the planning procedures used to control the design of the new school buildings, with particular reference to legislative and regulatory requirements.
- (b) Produce a simple flow diagram to show how the various stages of the design and planning processes are integrated to create a final design solution. The flow diagram must clearly differentiate between the roles and responsibilities of the design team and the town planners

Learning Outcome 2, Assessment Criteria 2a (i to v) and 2b (i and ii)

You should:

- allow 4h 30min to complete this task
- hand in a technical report on the above, and a flow diagram of the design and planning processes, to your teacher, as part of your portfolio
- include other sketches and/or images with your written work, where appropriate.

Task 3

- (a) Identify the various forms of technical information used in the design of the new school buildings and differentiate between the various forms of technical information in terms of how each is used in the design process.
- (b) Select and use appropriate technical information to inform the design process. This will involve working in small teams to interpret how and where such technical information will be used.
- (c) Produce a folder of sketches, drawings, specifications and schedules to support the design of the new school. Particular attention must be paid to legislation, regulations, sustainability issues and the impact of the new school buildings on the community and the natural environment.

*Learning Outcome 3, Assessment Criteria 3a (i to vii), 3b and c (i and ii)
PLTS (IE3, RL6, SM3, TW1, TW2)*

You should:

- allow 4h 30min to complete this task
- share technical information with the other members of your team
- discuss the sketches, drawings, specifications and schedules you produce with the other members of the team, and act on their comments where necessary
- hand in a technical report on the above to your teacher, as part of your portfolio
- include sketches, drawings, specifications and schedules with your report.
- include witness statements from your teacher as evidence of your working as part of a team to interpret and produce technical information.

Task 4

- (a) Identify the primary services utilities that are generally provided to buildings.
- (b) Compare the ways by which the different services utilities to be supplied to the new school building are integrated into the overall design in terms of availability, location, distribution, maintenance, repair and environmental impact.

Learning Outcome 4, Assessment Criteria 4a (i to v), PLTS (IE4, IE6)

You should:

- allow 4h 30min to complete this task
- hand in a technical report on the above to your teacher, as part of your portfolio
- include sketches and/or images with your written work, where appropriate.

Assessment grid

Assessment criteria topic	Band 1	Band 2	Band 3
	The learner has:		
1 Factors that influence the design process	<p>0 – 4 marks</p> <p>Demonstrated a basic knowledge and understanding of the factors that influence the design process by identifying and briefly describing a limited number of these factors.</p> <p>Related the factors to the building or structure under consideration in a superficial but generally accurate fashion.</p>	<p>5 – 8 marks</p> <p>Demonstrated a partial knowledge and understanding of the factors that influence the design process by identifying and briefly describing a wide range of these factors.</p> <p>Related the factors to the building or structure under consideration in a clear and accurate fashion.</p>	<p>9 – 12 marks</p> <p>Demonstrated an in-depth knowledge and understanding of the factors that influence the design process by identifying and briefly describing a comprehensive range of these factors.</p> <p>Related the factors to the building or structure under consideration in a thorough and detailed fashion.</p>
2 Planning requirements	<p>0 – 4 marks</p> <p>Demonstrated a basic knowledge and understanding of the requirements of the planning process by identifying a limited number of these requirements, briefly describing how they interact with the design process to produce design solutions.</p> <p>Produced a basic flow diagram of the interactive process.</p>	<p>5 – 8 marks</p> <p>Demonstrated a partial knowledge and understanding of the requirements of the planning process by identifying a wide range of these requirements, clearly describing how they interact with the design process to produce design solutions.</p> <p>Produced a clear and accurate flow diagram of the interactive process.</p>	<p>9 – 12 marks</p> <p>Demonstrated an in-depth knowledge and understanding of the requirements of the planning process by identifying a comprehensive range of these requirements, clearly and precisely describing how they interact with the design process to produce design solutions.</p> <p>Produced a detailed flow diagram of the interactive process.</p>
3 Technical information used in design	<p>0 – 4 marks</p> <p>Identified, as part of a team, some of the technical information used in design, and briefly described how, when and where such information is used.</p>	<p>5 – 8 marks</p> <p>Identified, as part of a team, most of the technical information used in design, and clearly described how, when and where such information is used.</p>	<p>9 – 12 marks</p> <p>Identified, as part of a team, all of the technical information used in design, and clearly and precisely described how, when and where such information is used.</p>
4 Primary services utilities	<p>0 – 4 marks</p> <p>Identified a limited range of the primary services utilities generally provided to buildings, and briefly described the installation and distribution procedures used.</p> <p>Considered some of the important factors relating to primary services utilities, including a basic outline of the environmental issues associated with building services.</p>	<p>5 – 8 marks</p> <p>Identified a wide range of the primary services utilities generally provided to buildings, and clearly described the installation and distribution procedures used.</p> <p>Considered most of the important factors relating to primary services utilities, including an accurate and reasoned outline of the environmental issues associated with building services.</p>	<p>9 – 12 marks</p> <p>Identified a comprehensive range of the primary services utilities generally provided to buildings, and clearly and precisely described the installation and distribution procedures used.</p> <p>Considered all or almost all of the important factors relating to primary services utilities, including a thorough and detailed treatment of the environmental issues associated with building services.</p>

Personal, Learning and Thinking Skills (PLTS)

The list below is indicative of the way this assignment supports the development and achievement of PLTS. The assignment supports the development of more PLTS than are covered through the assessment criteria alone.

Independent enquirers

- IE3 exploring issues, events and problems from different perspectives when producing and interpreting sketches, drawings, schedules and specification relating to the new school buildings
- IE4 analysing and evaluating information, and judging its relevance and value, when comparing and contrasting the way different services utilities are integrated into the design of the new school buildings
- IE5 considering the influence of circumstances, beliefs and feelings on decisions and events when describing the factors that influence the design of the new school buildings
- IE6 supporting conclusions, using reasoned arguments and evidence when comparing and contrasting the way different services utilities are integrated into the design of the new school buildings

Reflective learners

- RL6 communicating learning in relevant ways for different audiences when producing and interpreting sketches, drawings, schedules and specification relating to the new school buildings

Team workers

- TW1 co-operating with others to work towards common goals when working as a team to produce and interpret sketches, drawings, schedules and specification relating to the new school buildings
- TW2 reaching agreements, and managing discussions to achieve results, when producing and interpreting sketches, drawings, schedules and specification relating to the new school buildings

Self-managers

- SM3 organising time and resources, and prioritising actions, when producing and interpreting sketches, drawings, schedules and specification relating to the new school buildings