



DRAFT APPROVAL CRITERIA

**GCSE BUILT
ENVIRONMENT**

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Introduction

This document sets out the approval criteria for GCSE Built Environment. The criteria have been developed through extensive stakeholder engagement. They include the requirements that an awarding body must meet when developing the specification and assessment materials for GCSEs in this subject.

The approval criteria in this document will be effective as of _____ .

Specifications will also need to meet the demands of our Standard Conditions of Recognition and Qualification Approval Criteria.

Purpose

GCSE Built Environment introduces learners to, and develops their understanding and of, the built environment, including the trades and roles within it, the tools, technologies and materials used in its construction and maintenance, and the processes involved in its design. The qualification allows learners to develop an understanding of the practical skills involved in different stages of the building life cycle and encourages them to investigate their own built environment and understand the impact it has on the economy, society, culture and the natural environment.

The qualification may be taken by learners who wish to begin their journey towards a career in the construction and built environment sector, whether in trade-based, professional or managerial roles, or by learners who want to increase their understanding of the built environment more generally. It is designed to appeal to a broad range of learners with different interests, and centres with different facilities and skills amongst their staff and allow choice over how learners will develop their broad knowledge, skills and understanding in the subject area. It encourages subsidiarity in schools and allows them to explore their own communities and it promotes partnership working with employers.

Subject aims and objectives

1. GCSE Built Environment must enable learners to develop their:
 - 1.1 Understanding of the different stages within the life-cycle of the built environment;
 - 1.2 Understanding of how different trades and services relate to each other within the built environment;
 - 1.3 Appreciation of the built environment and its role in their daily lives, including design, creation and use and maintenance;
 - 1.4 Enquiry skills by exploring the built environment in the community and world in which they live;
 - 1.5 Skills in planning projects relating to the built environment, using the appropriate equipment to do so;
 - 1.6 Practical skills in designing or constructing elements of the built environment;
 - 1.7 Skills in using evidence to evaluate the use, performance and impact of the built environment, both in relation to their own work and that of others;
 - 1.8 Understanding of the tools, materials and processes used in designing, constructing, valuing and using the built environment, including how they change over time.

Subject content

2. The subject content of GCSE Built Environment specifications must meet the subject aims and objectives and include the knowledge and skills set out for each unit below.
3. The subject content should be split into the following units of study:
 - 3.1 **Unit 1:** Introduction to the Built Environment
 - 3.2 **Unit 2:** Creating the Built Environment
 - 3.3 **Unit 3:** Exploring the Built Environment.

Unit 1

4. In Unit 1, GCSE Built Environment specifications must enable learners to develop their knowledge, skills and understanding in:

- 4.1 Identifying and describing ideas, concepts and knowledge of the built environment;
- 4.2 Explaining concepts in the built environment;
- 4.3 Evaluating evidence, ideas and concepts in the built environment;
- 4.4 Comparing and contrasting ideas, concepts in, and evidence related to, the built environment.

5. The following topic areas, but not limited to:

Topics	Essential Content
Sector	The main projects in construction and the built environment, including: <ul style="list-style-type: none">• Buildings• Infrastructure and civil engineering projects• Building services engineering.
Built environment life-cycle	At the stages of: <ul style="list-style-type: none">• Raw material extraction• Manufacturing• Construction• Operation and maintenance• Demolition• Disposal, reuse or recycling.
Types of low-rise building	The features and characteristics of residential dwellings, commercial, industrial, agricultural, communal, religious and recreational buildings; different forms of infrastructure construction.
Tools, technologies and materials	<ul style="list-style-type: none">• Main elements and components of low-rise buildings• Main materials involved in constructing walls, installing building services, fitting rooves, finishing interiors.

<p>Building structures and forms</p>	<ul style="list-style-type: none"> • Renewable technologies and materials, including heat pumps, wind turbines and solar panels. <p>Cellular constructions, rectangular frame constructions, portal frame constructions, heritage and traditional methods.</p>
<p>Sustainable construction methods</p>	<ul style="list-style-type: none"> • The environmental, financial, cultural and social benefits of sustainable construction methods; • pollution and the preservation of the natural environment and natural habitats; • sustainable materials used to create building frames, walls, rooves; • waste disposal, re-use and recycling; • planning permission, brownfield sites and greenfield sites.
<p>Trades, employment and careers</p>	<p>Careers in the following areas:</p> <ul style="list-style-type: none"> • Architecture • Civil and structural engineering • Construction site management • Surveying • Bricklaying • Plastering • Carpentry and joinery • Electrical • Gas engineering • Plumbing • Painting, decorating and finishing.
<p>Health and safety</p>	<ul style="list-style-type: none"> • Risks for employees, employers and the public during construction and the built environment projects. • Following procedures and carrying out risk assessments. • Relevant legislation, including COSHH. • Using personal protective equipment. • Safety working with gas, water and electricity. • Working at height and in enclosed spaces.

Unit 2

6. In Unit 2, specifications must require that learners develop their knowledge and understanding of, and skills required in, creating the built environment. Specifications must require learners to develop knowledge, understanding and skills in either designing or constructing the built environment. In each pathway, Specifications must include, but not be limited to, the following:

Designing the Built Environment		Constructing the Built Environment	
Skills	Knowledge and understanding	Skills	Knowledge and understanding
Identify and calculate the information required for construction designs.	<ul style="list-style-type: none"> • Area • Volume • Length • Angles • High-level design requirements. 	Interpret a range of technical sources of information.	The symbols, conventions and terminology of: <ul style="list-style-type: none"> • Specifications • Building regulations • Drawings • Design briefs.
Writing and setting appropriate project success criteria to meet defined parameters.	With regard to: <ul style="list-style-type: none"> • Levels of tolerance • Timescales • Quality. 	Plan and organise work that meets specific requirements.	How work is sequenced, planned to meet deadlines and to comply with relevant health and safety practices.
Drawing different types of plans (including enlarging and reducing scale drawings).	The conventions of: <ul style="list-style-type: none"> • Block plans • Floor plans • Cross-sections • Scale drawings. 	Identify the resource requirements to meet design requirements.	Of: <ul style="list-style-type: none"> • Tools • Equipment • Personal protective equipment • Materials based on:

			<ul style="list-style-type: none"> ○ Characteristics ○ Qualities ○ Sustainability ○ Limitations.
Drawing elevations.	<p>The conventions and requirements of elevations that are:</p> <ul style="list-style-type: none"> • Internal • External <ul style="list-style-type: none"> ○ Rear (North) ○ Front (South) ○ Left (East) ○ Right (West). 	Calculate the materials required to complete construction tasks that meet design requirements.	<p>Of:</p> <ul style="list-style-type: none"> • Volume • Area • Perimeter • Time • Ratio.
Using the language of drafting.	<p>Of:</p> <ul style="list-style-type: none"> • BS standards (BS 1992:2007 + A2:2016 and subsequent updates, Building Information Modelling) • Conventions: <ul style="list-style-type: none"> ○ Annotations ○ Lines ○ Hatching • A range of symbols. 	Writing and setting appropriate project success criteria to meet the requirements of set briefs.	<p>With respect to:</p> <ul style="list-style-type: none"> • Levels of tolerance • Timescales • Quality.

<p>Drawing 2D plans of construction designs, by:</p> <ul style="list-style-type: none"> • Developing plans • Refining concepts • Sketching technical drawings. 	<p>The conventions and requirements of 2D plans of construction designs.</p>	<p>Prepare for three construction tasks from:</p> <ul style="list-style-type: none"> • Textiles • Wood • Brick • Plaster • Decorations • Tiles • Electrical • Plumbing <p>by:</p> <ul style="list-style-type: none"> • Checking materials for defects • Organising materials • Measuring materials • Marking out materials • Cutting materials • Setting out materials • Selecting dry bond materials • Mixing mortar materials. 	<p>The properties of common materials required to complete construction tasks (in relation to the three selected techniques).</p>
<p>Drawing 3D plans of construction designs by:</p> <ul style="list-style-type: none"> • Applying scenes, backgrounds and surroundings 	<p>The conventions and requirements of 3D plans of construction designs.</p>	<p>Carrying out techniques in three of the areas above in response to design requirements. Specifications should encourage learners and</p>	<p>The processes involved in carrying out simple construction tasks (in relation to the three selected techniques).</p>

<ul style="list-style-type: none"> • Rendering • Enhancing proposals • Creating 360° views • Adding building components, details and colour. 		centres to complete a range of contemporary and traditional tasks (where relevant to the chosen areas).	
Evaluating the quality of completed design tasks in response to the requirements and against personally-set success criteria.		Removing and safely disposing of materials used in carrying out three of the above techniques.	Safe and environmentally responsible means of disposing of materials commonly used when completing tasks from the three selected techniques.
		Use working practices that promote their own health and safety and that of others, ensuring the cleanliness and safety of their work areas and using the correct personal protective equipment.	Awareness of health and safety practices related to each of the selected techniques.
		Evaluating the quality of completed construction tasks in response to the requirements and against personally-set success criteria.	

Unit 3

7. In Unit 3, specifications must require learners to develop their knowledge, skills and understanding in:

- 7.1 Identifying and describing the factors which affect each stage of the building life cycle and the topics in section 7.6;
- 7.2 Evaluating and analysing each stage within the building life cycle and the topics in section 7.6;
- 7.3 Researching and understanding the stages and processes involved in the design, construction, value and use of their built environment;
- 7.4 Presenting their findings in appropriate ways;
- 7.5 Comparing and contrasting the processes involved in designing, constructing, valuing and using buildings from different periods.
- 7.6 The following topic areas, but not limited to:

Topic	Essential Content
Planning and design stages of buildings and structures	RIBA ¹ Stages 0, 1, 2, 3 and 4: <ul style="list-style-type: none">• Strategic definition• Preparation and brief• Concept design• Developed design• Technical design and the ways in which their built environment has been planned and designed to meet given needs.
Construction processes	RIBA Stage 5: <ul style="list-style-type: none">• Construction and the ways in which their built environment has been constructed to meet given needs.
Well-being of communities	The impact of their built environment on the social, economic, environmental and cultural well-being of communities.

¹ RIBA Plan of Work 2013, <https://www.ribaplanofwork.com/PlanOfWork.aspx>, or the most up to date version of this document.

Post-occupancy evaluations	<p>The process of evaluating a building or asset's impact on:</p> <ul style="list-style-type: none"> • Running costs • Staff and client satisfaction • Performance • Health and safety • Comfort <p>and the ways in which post-occupancy evaluations can be used to correct mistakes, inform decision-making and provide benchmarks for further evaluations.</p>
Change of use	<p>The processes involved in refurbishing, recycling and re-using building stock and assets in their local environment.</p>
Changing practices	<p>The changes in designing and construction processes in their built environment, including:</p> <ul style="list-style-type: none"> • Contemporary buildings • Pre-1919 buildings.

Assessment objectives

8. The assessment of the knowledge, understanding and skills required in the specification must target the following assessment objectives in line with the indicated weightings:

AO1	Demonstrate knowledge and understanding of the roles, sectors, concepts and processes within the built environment using relevant terminology.	40%
AO2	Apply skills, knowledge and understanding of the built environment in a range of contexts.	40%
AO3	<p>Analyse and evaluate evidence, make reasoned judgements and present conclusions in relation to:</p> <ul style="list-style-type: none"> - their own products/ outcomes - the built environment and its impact on people, the economy and the natural environment. 	20%

Scheme of assessment

9. GCSE Built Environment specifications must demonstrate that their scheme of assessment balances the considerations of manageability, engagement, reliability and validity. Specifications must ensure that:
- 9.1 the assessment arrangements are, overall, manageable for both centres and learners;
 - 9.2 the assessment arrangements are, overall, sufficiently engaging for learners and promote and sustain learners' interest in the subject area;
 - 9.3 the assessment arrangements will ensure the reliability of assessment outcomes, at centre and national level and over time, for example by identifying and describing:
 - the controls which will be applied to candidates and centres during non-examination assessment;
 - the forms of presentation which may be used by candidates when undertaking non-examination assessment;
 - the way in which marking criteria will be set for use by teachers and examiners;
 - how on-screen assessment will be conducted;
 - 9.4 the assessment arrangements are a valid form of assessment for the skills, knowledge and understanding being assessed.

Rationale requirement: Awarding bodies must explain the way in which the overall balance between these four elements will be achieved throughout the qualification. For example, conducting practical non-examination assessment in a simulated setting may reduce the validity of the assessment but make the assessment more manageable for centres.

10. GCSE Built Environment specifications must include the following assessment arrangements:

Unit	Arrangements
Unit 1 Introduction to the Built Environment	<ul style="list-style-type: none"> • Must be assessed by examination; • Must use on-screen assessment.
Unit 2 Creating the Built Environment	<ul style="list-style-type: none"> • Must be assessed through non-examination assessment; • Must require learners to undertake a practical project in which tangible outcomes are produced; • Must include planning, practical and evaluation stages in the project; • Must require learners to undertake assessment in <i>either</i> Designing the Built Environment <i>or</i> Constructing the Built Environment; • Must require centres to deliver a range of practical experiences over time; • Each pathway must present a similar level of challenge and must have the same duration.
Unit 3 Exploring the Built Environment	<ul style="list-style-type: none"> • Must be assessed through non-examination assessment; • Must require learners to undertake a case study within the local built environment in Wales, where possible; • Must require centres to submit accompanying explanations for candidates that investigate buildings or structures outside of these parameters; • Must encourage learners to present their findings in a variety of forms, including digital.

11. GCSE Built Environment specifications must ascribe 35% weighting to Unit 1 – Introduction to the Built Environment.
12. GCSE Built Environment specifications must ascribe 40% weighting to Unit 2 – Creating the Built Environment.
13. GCSE Built Environment specifications must ascribe 25% weighting to Unit 3 – Exploring the Built Environment.
14. GCSE Built Environment may be unitised or linear.
15. GCSE Built Environment must not be tiered.