

BTEC International Level 3 - **Construction** - Content Mapping

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
1	Health, Safety and Welfare in Construction and Built Environment	<p>Partially covered in:</p> <p>Unit 4 Safe Working Practice</p> <p>A1 Importance of safe working practice A2 Regulation of safe working practice A3 Planning of effective safe working practice B1 Risk assessment B2 Principles of hazard prevention C2 Working at height C3 Controlling substances hazardous to health C4 Manual handling</p>	<p>Not covered:</p> <p>LO1 Know the responsibilities of employers and employees under current health, safety and welfare legislation LO4 Know their own role in accident recording and reporting</p> <p><i>Note:</i> Reference to UK-specific health and safety legislation has been removed.</p>
2	Sustainable Construction	<p>Partially covered in:</p> <p>Unit 8 Sustainability in Construction</p> <p>A1 Features of the natural environment that need to be protected A2 Impact of construction activities on the environment A3 Impact of new development on the environment B1 Energy-based techniques B2 Material based techniques B3 Waste-based techniques B4 Methods of minimising the impact of development</p>	<p>Not covered:</p> <p>LO3 Protection by United Kingdom (UK)/European Union (EU) legislation and control via the Health & Safety Executive, Environmental Agency and Local Authorities (LAs).</p>

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
3	Mathematics and the Construction and the Built Environment	<p>Fully covered in:</p> <p>Unit 6 Construction Mathematics</p> <p>A1 Calculator functions</p> <p>A2 Mathematical techniques including issues of rounding/accuracy</p> <p>A3 Algebraic techniques and expressions</p> <p>B1 Basic techniques</p> <p>B2 Practical construction problems</p> <p>B3 Circular measures</p> <p>C1 Trigonometric techniques</p> <p>C2 Geometric techniques</p> <p>C3 Practical construction problems</p> <p>D1 Graphical techniques</p> <p>D2 Statistical techniques</p> <p>D3 Solving of practical construction problems</p>	
4	Science and Materials in Construction and the Built Environment	<p>Fully covered in:</p> <p>Unit 3 Construction Science</p> <p>A1 Material properties</p> <p>A2 Properties of construction materials</p> <p>B1 Degradation of construction materials</p> <p>B2 Effects of temperature changes on construction materials</p> <p>B3 Behaviour of structural members under load</p> <p>C1 Scientific principles</p> <p>D1 Acoustic comfort</p> <p>D2 Lighting</p>	

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
5	Construction Technology and Design in Construction and Civil Engineering	<p>Fully covered in:</p> <p>Unit 1 Construction Technology</p> <p>A1 Forms of low-rise construction</p> <p>Unit 2 Construction Design</p> <p>A1 Stages and tasks involved in the design process</p> <p>A2 Factors that influence the design process</p> <p>B1 Project information</p> <p>B2 Initial project brief</p> <p>B3 Design production</p> <p>B4 Computer-aided design</p> <p>C4 Sustainability</p> <p>Unit 11 Management of a Construction Project</p> <p>A1 Principles of management</p>	
6	Building Technology in Construction	<p>Fully covered in:</p> <p>Unit 1 Construction Technology</p> <p>A1 Forms of low-rise construction</p> <p>B1 Subsoil investigation</p> <p>Unit 2 Construction Design</p> <p>A2 Factors that influence the design process</p> <p>C1 Forms of low- and medium-rise structures</p> <p>C2 Sub-structure construction</p> <p>C3 Superstructure construction</p>	

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
7	Project Management in Construction and the Built Environment	<p>Fully covered in:</p> <p>Unit 2 Construction Design</p> <p>A1 Stages and tasks involved in the design process A2 Factors that influence the design process</p> <p>Unit 34 Planning the Built Environment</p> <p>A1 Planning considerations</p> <p>Unit 11 Management of a Construction Project</p> <p>A1 Principles of management A2 Application of construction management techniques B2 Cost management techniques</p>	
8	Graphical Detailing in Construction and the Built Environment	<p>Fully covered in:</p> <p>Unit 1 Construction Design</p> <p>B3 Design Production</p> <p>Unit 7 Graphical Detailing</p> <p>A1 Manual methods A2 Computer-aided design (CAD) A3 Comparison of manual and CAD methods B1 Construction drawings C1 Principles, techniques and conventions C2 Freehand sketches C3 Skills, knowledge and behaviours</p>	

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
9	Measuring, Estimating and Tendering Processes in Construction and the Built Environment	<p>Partially covered in:</p> <p>Unit 15 Measurement Techniques in Construction</p> <p>A1 Introduction to taking off quantities A2 Standard methods of measurement B1 Processes in the production of quantities B2 Production of substructure quantities for a building B3 Production of superstructure quantities for a building C1 Abstract of quantities</p> <p>Unit 20 Quantity Surveying</p> <p>A1 Functions of the professional quantity surveyor including approximate quantities</p> <p>Unit 5 Management of Commercial Risk</p> <p>A1 Tender strategies B1 Commercial intelligence tendering</p>	<p>Not covered:</p> <p>LO3 Be able to calculate all-in rate of materials, labour and plant</p>
10	Surveying in Construction and Civil Engineering	<p>Fully covered in:</p> <p>Unit 10 Surveying in Construction</p> <p>A1 Linear, levelling and angular measurement A2 Equipment used to perform fieldwork surveys B1 Linear surveys B2 Levelling surveys B3 Read and record horizontal angles of a closed traverse B4 Basic arithmetic operations C1 Conventions used in survey drawings C2 Production of survey drawings</p> <p>Unit 13 Site Engineering for Construction</p> <p>A3 Setting out of a small building</p>	

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
11	Economics and Finance in Construction and the Built Environment	<p>Fully covered in:</p> <p>Unit 5 Management of Commercial Risk</p> <p>A4 Commercial risk analysis B5 Market structure C1 Application of risk analysis to make commercial decisions C2 Analysis of estimated project cost</p> <p>Unit 22 Economics and Finance in Construction</p> <p>A2 Market structures, supply and demand A3 Interaction of supply, demand and price B1 Economic resources C1 Cost control C2 Cost planning C3 Cost-control techniques C4 Budgeting C5 Reconciliation of costs D2 Feasibility factors</p>	

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
12	Setting Out Processes in Construction and the Built Environment	<p>Fully covered in:</p> <p>Unit 10 Surveying in Construction</p> <p>A2 Emerging technologies</p> <p>Unit 13 Site Engineering for Construction</p> <p>A1 Setting out terminology A2 Basic setting out processes A4 Equipment to be used to set out. B1 Setting out drainage B2 Setting out embankments and cutting profiles B3 Interpreting drawn information to set out roads C1 Vertical and horizontal control of structures C2 Vertical and horizontal control of excavation</p>	
13	The Underpinning Science for the Provision of Human Comfort in Buildings	<p>Fully covered in:</p> <p>Unit 3 Construction Science</p> <p>C1 Scientific principles of thermal comfort C2 Heat losses and gains in buildings C3 Condensation D1 Acoustic Comfort D2 Lighting</p> <p>Unit 21 Building Services Science</p> <p>B2 The generation, transmission and distribution of electricity</p> <p>Unit 27 Plumbing and Fluid Behaviour in Building Services Engineering</p> <p>C1 Dynamic fluid flow C2 Pipes and ductwork C3 Energy loss C4 Losses in pipe and ductwork</p>	

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
14	Structural Mechanics in Construction and Civil Engineering	<p>Fully covered in:</p> <p>Unit 29 Principles and Applications of Structural Mechanics</p> <p>A1 Concepts A2 Simple structural behaviour from given data B1 Beams B2 Columns B3 Frames C1 Beam design C2 Column design C3 Retaining wall design D1 Computer software packages for design calculations D2 Benefits and drawbacks of using computer software</p>	
15	Building Surveying in Construction	<p>Partially covered in:</p> <p>Unit 12 Building Surveying in Construction</p> <p>C1 Types of survey C2 Undertaking a building survey C3 Undertaking measured surveys C4 Skills, knowledge and behaviours</p>	<p>Not covered:</p> <p>LO1 Know the role of the building surveyor and the route to professional status</p>

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
16	Mechanical and Electrical Services in Construction	<p>Fully covered in:</p> <p>Unit 16 Provision of Primary Services in Buildings</p> <p>A1 Direct cold-water systems A2 Indirect cold-water systems A3 Direct hot-water systems A4 Indirect hot-water systems B1 Above-ground drainage principles B2 Above-ground drainage approaches B3 Below-ground drainage principles B4 Below-ground drainage approaches C1 Electrical principles C2 Electrical components C3 Ring final circuits C4 Radial circuits C5 Gas installation principles C6 Gas installations</p>	
17	Building Regulations and Control in Construction	None	
18	Computer-aided Drafting and Design for Construction	<p>Partially covered in:</p> <p>Unit 2 Construction Design</p> <p>B4 Computer-aided design</p> <p>Unit 7 Graphical Detailing</p> <p>A2 Computer-aided design A3 Comparison of manual and CAD methods of drawing</p>	

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
19	Further Mathematics in Construction and the Built Environment	<p>Fully covered in:</p> <p>Unit 17 Further Mathematics for Construction</p> <p>A1 Transposition techniques A2 Trigonometric techniques A3 Construction related problems B1 Differential calculus B2 Integral calculus B3 Numerical integration C1 Statistical methods C2 Use of statistical methods in construction contexts</p>	
20	Property Valuation in Construction	<p>Partially covered in:</p> <p>Unit 22 Economics and Finance in Construction</p> <p>A1 Structure and size of the construction industry A2 Market structures, supply and demand A3 Interaction of supply, price and demand</p>	<p>Not covered:</p> <p>LO2 Know the reasons for valuing property LO3 Be able to produce valuations LO4 Understand how to obtain a mortgage</p>

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
21	Projects in Construction and the Built Environment	<p>Fully covered in:</p> <p>Unit 1 Construction Technology</p> <p>B1 Forms of low-rise construction B2 Material selection for construction projects</p> <p>Unit 2 Construction Design</p> <p>A2 Factors that influence the design process</p> <p>Unit 19 Projects in Construction</p> <p>A1 Types of construction project A2 Design considerations of construction projects B1 Methods and techniques for different construction projects B2 Material selection for construction projects C1 Economic impacts of construction</p>	

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
22	Design Procedures in Construction	<p>Partially covered in:</p> <p>Unit 2 Construction Design</p> <p>A1 Stages and task involved in the design process A2 Factors that influence the design process B1 Project information B2 Initial project brief B3 Design production B4 Computer-aided design</p> <p>Unit 5 Management of Commercial Risk</p> <p>A1 Tender strategies A2 Contractual arrangements A4 Commercial risk analysis</p> <p>Unit 8 Sustainability in Construction</p> <p>A1 Features of the natural environment that need to be protected A2 Impact of construction activities on the environment A3 Impact of new development on the environment</p> <p>Unit 11 Sustainability in Construction</p> <p>A1 Principles of Management B1 Application of purchasing methods B2 Cost management techniques</p>	<p>Not covered:</p> <p>UK specific references to United Kingdom (UK) Royal Institute of British Architects (RIBA) Plan, Private Finance Initiatives (PFI's) and Purchasing Power Parity (PPP) initiatives.</p>
23	Spatial Data Techniques in Construction and Civil Engineering	None	

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
24	Planning Procedures in Construction	<p>Partially covered in:</p> <p>Unit 2 Construction Design</p> <p>A2 Factors that influence the design process</p> <p>Unit 34 Planning the Built Environment</p> <p>A1 Planning considerations A2 Planning process</p>	<p>Not covered:</p> <p>LO1 Reference to Development Control, United Kingdom (UK) Statutory Framework/Environmental Protection/Unitary Development Plans</p>
25	Property Law in Construction	None	
26	Geographical Information Systems in Construction	None	
27	Surveying Technology in Construction and Civil Engineering	<p>Partially covered in:</p> <p>Unit 10 Surveying in Construction</p> <p>A1 Linear, levelling and angular measurement A2 Equipment used to perform fieldwork surveys B1 Linear surveys B2 Levelling surveys B3 Read and record horizontal angles of a closed traverse B4 Basic arithmetic operations A3 Sources of systematic errors</p>	<p>Not covered:</p> <p>LO1 Principal of optics and electromagnetic waves applied to surveying</p>

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
28	Topographic Surveying in Construction and Civil Engineering	<p>Partially covered in:</p> <p>Unit 10 Surveying in Construction</p> <p>A1 Linear, levelling and angular measurement</p> <p>A2 Equipment used to perform fieldwork activities including emerging technologies</p> <p>B1 Linear surveys</p> <p>B2 Levelling surveys</p> <p>B3 Read and record horizontal angles of a closed traverse</p> <p>B4 Basic arithmetic operations</p> <p>B5 Calculation of coordinates</p> <p>C3 Corrected Coordinates</p>	<p>Not covered:</p> <p>LO3 Surveying of Buildings please refer to the new International Unit 12: Building Surveying in Construction</p>

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
29	Construction in Civil Engineering	<p>Partially covered in:</p> <p>Unit 2 Construction Design</p> <p>A2 Factors that influence the design process</p> <p>Unit 32 Highway Construction and Maintenance in Civil Engineering</p> <p>B1 Forms of highway construction B2 Drainage of highways</p> <p>Unit 23 Construction in Civil Engineering</p> <p>A1 Earthwork activities A2 Earthmoving and compaction equipment A4 Temporary works A5 Dewatering operations B1 Foundations B2 Design and drainage systems B3 Utilities C1 Structural frames C2 Retaining walls</p>	<p>Not covered:</p> <p>LO4 Understand civil engineering infrastructure</p>

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
30	Public Health Engineering in Civil Engineering	<p>Fully covered in:</p> <p>Unit 30 Public Health Engineering</p> <p>A1 Introduction to below ground drainage systems</p> <p>A2 Installation, testing and maintenance of below ground drainage systems</p> <p>A3 Methods of treating domestic sewage</p> <p>B1 Types and forms of solid domestic waste</p> <p>B2 Methods of disposal of solid waste</p> <p>B3 Requirements and constraints relating to the disposal of solid waste</p> <p>C1 Sources of drinking water</p> <p>C2 Treatment of drinking water</p> <p>C3 Storage and distribution of drinking water</p>	
31	Highway Construction and Maintenance in Civil Engineering	<p>Fully covered in:</p> <p>Unit 32 Highway Construction and Maintenance in Civil Engineering</p> <p>A1 Introduction to planning a new highway</p> <p>A2 Earthwork construction for new highways</p> <p>B1 Forms and methods of highway construction</p> <p>B2 Drainage of highways</p> <p>B3 Drainage of land and subsoils</p> <p>B4 Quality control</p> <p>C1 Introduction to highway maintenance</p> <p>C2 Highway maintenance processes</p>	

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
32	Building Services Control Systems	<p>Fully covered in:</p> <p>Unit 25 Building Services Control Systems</p> <p>A1 Control loops A2 Modes of control A3 Operational features A4 Purpose of control systems B1 Generic functions B2 Safety controls and functions of safety control systems B3 Operational characteristics of control devices and components C1 Control functions</p>	
33	Building Services Science	<p>Fully covered in:</p> <p>Unit 21 Building Services Science</p> <p>A1 Energy A2 Heat transfer A3 Combustion of fuels B1 Electrical principles B2 Generation, transmission and distribution of electricity C1 Ideal gases and application to building services engineering applications C2 Thermodynamic properties and processes C3 Change of state C4 Air conditioning systems and refrigeration</p>	

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
34	Low Temperature Hot Water Heating Building Services Engineering	<p>Fully covered in:</p> <p>Unit 14 Low Temperature Hot Water Systems in Building Services</p> <p>A1 Heating requirements A2 Design conditions A3 External considerations A4 Heat losses B1 Pipework circuits B2 Pumps B3 Heat emitters B4 Boilers and heat generators B5 Expansion vessels B6 Hot-water storage tanks B7 Access and maintenance C1 Pipework C2 Pumps C3 Heat emitters C4 Boilers C5 Expansion vessels C6 Hot-water storage tanks</p>	

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
35	Ventilation and Air Conditioning in Building Services Engineering	<p>Fully covered in:</p> <p>Unit 21 Building Services Science</p> <p>C4 Air conditioning systems and refrigeration</p> <p>Unit 26 Heating, Ventilation and Air Conditioning Design</p> <p>A1 Air-terminal devices A2 Ductwork, jointing and systems A3 Air-handling units B1 Requirements B2 Design conditions B3 Ventilation systems C1 Air-flow rates and supply conditions C2 Air-terminal devices C3 Ductwork and fans C4 Air-conditioning plant</p>	
36	Fluids-Static and Dynamic in Building Services Engineering	<p>Partially covered in:</p> <p>Unit 27 Plumbing and Fluid Behaviour in Building Services Engineering</p> <p>C1 Dynamic fluid flow C2 Pipes and ductwork C3 Energy loss C4 Losses in pipes and ductwork</p>	<p>Not covered:</p> <p>LO1 Know the properties of fluids LO2 Understand the theory and applications of static fluid systems</p>

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
37	Refrigeration Technology in Building Services Engineering	<p>Partially covered in:</p> <p>Unit 21 Building Services Science</p> <p>C1 Ideal gases and application to building services engineering applications</p> <p>C2 Thermodynamic properties and processes</p> <p>C3 Change of state</p> <p>C4 Air conditioning systems and refrigeration</p>	<p>Not covered:</p> <p>LO2 Understand the properties and uses of different types of refrigeration systems</p> <p>LO3 Create design proposals</p> <p>LO4 Understand the technical and operational requirements of refrigeration systems</p> <p>LO5 Know current legislation</p>
38	Plumbing Technology in Building Services Engineering	<p>Fully covered in:</p> <p>Unit 16 Provision of Primary Services in Buildings</p> <p>B1 Above-ground drainage principles</p> <p>B2 Above-ground drainage approaches</p> <p>B3 Below-ground drainage principles</p> <p>B4 Below-ground drainage approaches</p> <p>C5 Gas installation principles</p> <p>C6 Gas installations</p> <p>Unit 27 Plumbing and Fluid Behaviour in Building Services Engineering</p> <p>A1 Physical properties and behaviour of water</p> <p>A2 Sources of cold water</p> <p>A3 Cleansing process</p> <p>A4 Standards</p> <p>A5 Distribution</p> <p>B1 Appliances and components</p> <p>B2 Materials and components</p> <p>B3 Hot and cold water systems</p> <p>B4 Types of drainage</p> <p>B5 Drainage systems, materials and testing</p>	

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
39	Electrical Principles in Building Services Engineering	<p>Partially covered in:</p> <p>Unit 21 Building Services Science</p> <p>A1 Energy B1 Electrical principles B2 Generation, transmission and distribution of electricity</p> <p>Unit 28 Electrical Principles and Installation Standards in Building Services Engineering</p> <p>A3 Units and calculations A4 Terminology, principles and calculations</p> <p>Unit 16 Provision of Primary Services in Buildings</p> <p>C1 Electrical principles C2 Electrical components C3 Ring final circuits C4 Radial circuits</p>	<p>Not covered:</p> <p>LO1 Use of electrical measuring instruments</p>

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
40	Electrical Installation Standards and Components in Building Services Engineering	<p>Partially covered in:</p> <p>Unit 28 Electrical Principles and Installation Standards</p> <p>A1 Regulations and legislation A2 Earthing, bonding and circuit protection A3 Units and calculations A4 Terminology, principles and calculations B1 Power requirements B2 Wiring methods and techniques B3 Electrical lighting B4 Data, security and fire protection C1 Materials and components C2 Consumer units C3 Security and fire C4 Drawings</p>	<p>Not covered:</p> <p>LO5 Understand the requirements for special installations</p>
41	Electrical Installation Design in Building Services Engineering	<p>Fully covered in:</p> <p>Unit 28 Electrical Principles and Installation Standards</p> <p>B1 Power requirements B2 Wiring methods and techniques B3 Electrical lighting B4 Data, security and fire protection C1 Materials and components C2 Consumer units C3 Security and fire C4 Drawings</p>	

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
42	Commissioning Electrical Installations in Building Services Engineering	<p>Partially covered in:</p> <p>Unit 28 Electrical Principles and Installation Standards</p> <p>A1 Regulations and legislation</p>	<p>Not covered:</p> <p>LO1 Know the requirements for inspection, testing and commissioning of electrical installations</p> <p><i>Unit 28 includes only limited coverage of the aspects of commissioning electrical installations.</i></p> <p>LO2 Understand the inspection process for electrical installations</p> <p>LO3 Understand how to carry out testing and commissioning instructions</p> <p>LO4 Understand the certification and reporting process</p>
43	Employment Framework in the Built Environment	<p>Partially covered in:</p> <p>Unit 11 Management of a Construction Project</p> <p>A1 Roles and responsibilities of construction personnel</p> <p>A2 Application of management techniques</p> <p>Unit 19 Projects in Construction</p> <p>A1 Types of construction project</p>	<p>Not covered:</p> <p>LO1 Structures and roles</p> <p>LO2 Employer rights and responsibilities</p> <p>LO3 Compiling of work-based evidence</p>

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
44	Conversion and Adaption of Buildings	<p>Partially covered in:</p> <p>Unit 2 Construction Design</p> <p>A2 Factors that influence the design process</p> <p>Unit 12 Building Surveying in Construction</p> <p>C1 Types of building survey C3 Undertaking measured surveys</p> <p>Unit 24 Conversion and Adaption and Maintenance of Buildings</p> <p>A1 Conversion and adaption A2 Levels of intervention C1 Process of conversion and adaption C2 Legislative requirements C3 Options for conversion and adaption C4 Proposals for conversion and adaption schemes</p>	
45	Principles and Applications of Management Techniques in the Construction Industry	<p>Fully covered in:</p> <p>Unit 11 Management of a Construction Project</p> <p>A1 Principles of management A2 Application of construction management techniques B1 Application of purchasing methods B2 Cost management techniques C1 Production control systems</p>	

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
46	Tendering and Estimating in Construction	<p>Partially covered in:</p> <p>Unit 5 Management of Commercial Risk</p> <p>A1 Tender strategies A3 Supply chain A4 Commercial risk analysis B1 Commercial intelligence C2 Analysis of the estimated project cost</p> <p>Unit 15 Measurement Techniques in Construction</p> <p>A2 Standard Methods of Measurement</p>	<p>Not covered:</p> <p>LO3 Be able to calculate unit rates</p>
47	Measurement Techniques in Construction	<p>Fully covered in:</p> <p>Unit 15 Measurement Techniques in Construction</p> <p>A2 Standard Methods of Measurement</p> <p>Unit 20 Quantity Surveying</p> <p>A3 Preparation of bills of quantities B1 Taking off B2 Abstraction of bill of quantities C1 Variations</p>	
48	Structural Behaviour and Detailing for Construction	None	

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
49	Construction Design Procedures	<p>Partially covered in:</p> <p>Unit 2 Construction Design</p> <p>A1 Stages and tasks involved in the design process A2 Factors that influence the design process B1 Project information B3 Design production B4 Computer-aided design C4 Sustainability</p> <p>Unit 5 Management of Commercial Risk</p> <p>A2 Contractual arrangements</p> <p>Unit 20 Quantity Surveying</p> <p>A5 Contractual management</p>	<p>Not covered:</p> <p>LO3 Know the function of the design team during the build stage of a project</p> <p>LO4 Know the function of the design team during the project management stage of a project</p>
50	Construction Design Technology	<p>Partially covered in:</p> <p>Unit 2 Construction Design</p> <p>B4 Computer-aided design C4 Sustainability</p> <p>Unit 3 Construction Science</p> <p>B1 Degradation of construction materials</p> <p>Unit 5 Management of Commercial Risk</p> <p>A4 Commercial risk analysis</p> <p>Unit 24 Conversion and Adaption and Maintenance of Buildings</p> <p>B1 Need for maintenance B2 Maintenance approaches B3 Levels of maintenance intervention and repair</p>	<p>Not covered:</p> <p>LO1 Understand how specifications are used to realise design solutions</p>

2010 QCF Unit		International BTEC Level 3 unit to which 2010 unit relates	Areas of content in the 2010 unit not covered in the International unit
No.	Title		
51	Civil Engineering Construction	<p>Partially covered in:</p> <p>Unit 23 Construction in Civil Engineering</p> <p>A1 Earthwork activities A2 Earthmoving and compaction equipment A3 Concreting equipment A4 Temporary works A5 Dewatering operations A6 Piling operations B1 Foundations B2 Design and drainage systems B3 Utilities C1 Structural frames</p>	<p>Not covered:</p> <p>LO4 Understand health and safety issues associated with civil engineering construction activities</p>
52	Structural Analysis and Design in Construction	None	
53	Personal and Professional Development in the Built Environment	None	
54	Information and Communication Technology for Construction and the Built Environment	None	

BTEC International Level 3 units not mappable to QCF qualification

International Unit Number	International Unit Name
9	Building Information Modelling and Artificial Intelligence
18	Work Experience
31	Specialist Civil Engineering Techniques
33	Offsite and Onsite Construction Methods