TGI APPRENTICESHIPS

Our Apprenticeship Programme

Construction and the Built Environment

Associated qualifications	BTEC Level 3 National Foundation Diploma in Construction and the Built Environment BTEC Level 4 HNC in Construction BTEC Level 5 HND in Construction and the Built Environment (Construction Management)*
Duration	5 years

Overall learning objectives/outcome for the apprenticeship:

The Foundation Diploma supports the progression to Higher Education within the Construction and Built Environment sector. It offers a broad range of subjects required to fulfil the requirements of a number of roles within the industry and the progression onto the HNC/D courses. The qualification also gives apprentices specialist knowledge and technical skills enabling progression to other related higher education courses.

BTEC Level 4 HNC Construction and the Built Environment (Construction) offers apprentices a broad introduction to the subject area via mandatory learning as well as units within the general pathways. This effectively builds underpinning core skills with general specialisation. Apprentices will gain a wide range of sector knowledge tied to practical skills gained in research, self-study, directed study and workplace scenarios.

BTEC Level 5 HND Construction and the Built Environment (Construction Management) offers apprentices 6 specialist pathways designed to support progression into relevant occupational areas or on to degree – level study. These pathways link to professional Body standards and can provide professional status and progression. Examples of degree courses that the apprentice can go on to take are:

BSc Building Surveying	BA/BSc Architectural Technology	BA/BSc Construction Management
BA/BSc project Management	BA/BSc Facilities Management	BSc Civil Engineering
BA/BSc Quantity Surveying	BA/BSc Structural Engineering	

* Course and tuition fees paid for by the employer in advance of the Level 4 HNC in Construction course commencing

Years 1 & 2	BTEC Level 3 National Foundation Diploma in Construction and the Built Environment
	Off-the-job training and assessment
	Construction Principles (Unit 1) In this unit, you will develop the skills needed to solve a variety of practical construction problems by applying scientific knowledge and carrying out mathematical and statistical techniques. You will learn about the science underpinning the manufacture, properties and degradation of construction materials. You will apply mathematical principles and techniques to carry out calculations that determine how materials behave under the action of forces or loads when used as structural members, and draw conclusions regarding whether a material is fit for purpose. You will understand scientific principles and apply them to heat loss, sound reduction and lighting levels to provide human comfort during structure design, build and refurbishment. Outcomes: 1. Demonstrate knowledge of construction terms, standards, concepts, methods and processes. 2. Demonstrate understanding of construction standards, concepts, methods and processes in context, in order to find solutions to real-life construction problems 3. Analyse and evaluate information in order to recommend and justify the use of technologies and methodologies to solve construction problems in context 4. Make connections between information, technologies and methodologies to resolve construction problems
	Unit 1 Assessment This unit is assessed through a written examination set and marked by Pearson. The examination is 1 hour and 30 minutes. During the supervised assessment period, learners will be assessed on their knowledge of construction materials and their properties, application of mathematics in construction contexts, and the provision of human comfort in buildings. The number of marks for the paper is 75.
	Construction Design (Unit 2) In this unit, you will learn the principles and practice involved in the design and construction of low- and medium-rise buildings and structures, and gain an understanding of how design is influenced by client requirements and external constraints. You will consider the stages involved in the design and construction process and gain an understanding of the use of design techniques, including sketching and computer-aided design (CAD) to provide efficient methods of designing, constructing and maintaining structures over their life cycle. To complete the assessment task within this unit, you will need to draw on your learning from across your programme. Outcomes: 1. Demonstrate knowledge and understanding of construction design and build concepts and processes 2. Apply knowledge and understanding of construction design and build concepts and processes to design a building to meet an initial project brief 3. Analyse site, client and construction information to make decisions in order to produce a building design to meet an initial project brief 4. Be able to develop a reasoned design solution for a building to meet an initial project brief

Years 1 & 2	BTEC Level 3 National Foundation Diploma in Construction and the Built Environment
	Off-the-job training and assessment
	Unit 2 Assessment This unit is assessed under supervised conditions. Learners will be given a scenario two weeks before a supervised assessment period in order to carry out research The supervised assessment period is a maximum of 12 hours and can be arranged over a number of sessions. During the supervised assessment period, learners will be given a set task that will assess their ability to produce designs to meet client requirements. Pearson sets and marks the task. The number of marks for the unit is 63.
	Construction Technology (Unit 4) In this unit, you will examine various forms of low-rise construction and consider the most appropriate forms for differing site conditions and client requirements. You will gain an understanding of the different types of foundation that could be used on a project and the factors that influence its selection. You will investigate superstructure, external works design and construction, considering the most appropriate specifications and details for given scenarios. This unit will give you the underlying knowledge and understanding of construction technology that supports a wide range of other units in this qualification. A sound knowledge of construction technology is an essential aspect of many roles, including architect, site manager, quantity surveyor, planner, buyer, estimator, etc. Outcomes: A Understand common forms of low-rise construction B Examine foundation design and construction C Examine superstructure design and construction D Examine external works associated with construction projects.
	Unit 4 Assessment (examples) - A report to a client that covers the use of different structural forms for the proposed project, considering the effectiveness of each structural form. - A report for a given project scenario that covers the foundation design and different methods that can be used for the design and construction of the foundations, superstructures and external works. - A report for a given project scenario that covers the design and construction of the external works, including the incorporation of sustainable drainage systems.
	Health and Safety in Construction (Unit 5) In this unit, you will examine the responsibilities of employees and employers with regard to UK legislation and regulations and the procedures used to control hazards and risks for construction operations across a range of activities. You will use relevant policies and procedures to design a safe system of work that could be instigated and maintained in a construction context. You will also investigate how all aspects of health and safety are monitored to ensure they are kept up to date, employers and employees are well informed and any changes are evaluated and controlled. Outcomes: A Understand how health and safety legislation is applied to construction operations B Carry out the development of a safe system of work for construction operations

Years 1 & 2	BTEC Level 3 National Foundation Diploma in Construction and the Built Environment
	Off-the-job training and assessment
	C Understand the need for the review of safety systems for construction operations.
	Unit 5 Assessment (examples) - Presentations, explanatory leaflets or a formal report that references case studies, showing the impact of how legislation and regulations uphold and improve health and safety on construction sites. Reference to statistics could provide justification of legislation and regulation effectiveness. - A safety survey with completed documentation, including the production of a risk assessment and method statement. - A report evaluating how safe systems can be improved following the reporting of accidents, utilising review procedures.
	Surveying in Construction (Unit 6) In this unit, you will become familiar with basic surveying techniques, carry out surveying tasks and present fieldwork data in a suitable format. You will consider the nature of survey measurements, the instruments used and the errors inherent in the measurement systems, including the best ways to reduce or eliminate them. Outcomes: A Understand the methods and technologies that underpin surveys B Undertake fieldwork surveys to collect data for drawings C Develop drawings from completed fieldwork surveys.
	Unit 6 Assessment (examples) - A report on the techniques and instruments used to record survey data, including potential sources of systematic errors and their minimisation to produce accurate data for plan and section details production. - Linear survey and level booking sheets to demonstrate accurate recording of surveying measurements. - Teacher observation sheets confirming individual understanding and contribution to the practical tasks carried out during fieldwork tasks with others. - A report: • evaluating the methods used to take levelling and angular measurements in terms of accuracy • including linear survey and level booking sheets of reduced levels and check calculations • including coordinates, calculations and corrections. - A series of plan and section scaled detail drawings, to include a: • linear survey line plotted accurately to scale • contoured plan of a surveyed area of land • long section detail of one surveyed line indicating rise and fall of ground between survey stations • plot of a corrected closed traverse. The drawings/details can be produced using manual or computer-aided design (CAD) drawing techniques.

Years 1 & 2	BTEC Level 3 National Foundation Diploma in Construction and the Built Environment
	Off-the-job training and assessment
	Building Surveying in Construction (Unit 10) In this unit, you will learn how to carry out a buildings survey, identify defects and record findings in a format suitable for a range of end users. You will gain a good understanding of building defects, their causes and the remedies available. You will learn how to undertake a measured survey of an existing property to produce scale plans and elevations of the building. Outcomes: A Understand the impact of the methods used to construct existing buildings on current and future maintenance requirements B Explore different defects and methods of repair for low-rise residential properties C Undertake a building survey of a low-rise residential property.
	Unit 10 Assessment (examples) - Illustrated report or presentation and information booklet on different types and styles of residential properties, their common defects and methods of repair. - Building and measured survey of a low-rise residential property. Production of survey report detailing the condition, defects, remedial works, plans and elevations.
	Provision of primary Services in Construction (Unit 14) In this unit, you will learn the principles and practices that underpin the design and installation of hot and cold water systems, above-ground and below-ground drainage, single-phase electrical systems and gas installations. You will examine the specification of building services systems in terms of the materials used, the appropriate dimensions, capacities and falls, and any health and safety issues. You will gain an understanding of the advantages and disadvantages of the different systems available to justify the selection of the systems used. Outcomes: A Examine the practices associated with the provision of hot- and cold-water systems B Examine the principles and approaches associated with the provision of above- and below-ground drainage systems C Understand the principles of the provision of simple, single-phase electrical systems and domestic gas installations.
	Unit 14 Assessment (examples) - Learners will be given construction drawings of a domestic building and associated external areas. They will be required to provide a report that includes details of an appropriate direct and indirect hotand cold-water system. - Learners will be given construction drawings of a domestic building. They will be required to provide a report that includes details of an appropriate layout of single-phase electrical systems to buildings, and the internal layouts of ring final circuits and radial circuits, including line drawings, materials and components.

Year 3 & 4	BTEC Level 4 HNC in Construction and the Built Environment (Construction)
	Off-the-job training and assessment
	Construction Technology (Unit 2) This unit will introduce the different technological concepts used to enable the construction of building elements; from substructure to completion, by understanding the different functional characteristics and design considerations to be borne in mind when selecting the most suitable technological solution. Topics included in this unit are: substructure, superstructure, finishes, building services and infrastructure components. On successful completion of this unit a student will be able to analyse scenarios and select the most appropriate construction technology solution. Outcomes: By the end of this unit, students will be able to: 1. Explain the terminology used in construction technology 2. Describe the different techniques used to construct a range of substructures and superstructures, including their function and design selection criteria 3. Identify the different types of civil engineering/infrastructure technology used in support of buildings 4. Illustrate the supply and distribution of a range of building services and how they are accommodated within the building
	Construction Technology (Unit 2) Written assignment 1
	Construction Technology (Unit 2) Written assignment 2
	Science and Materials (Unit 3) This unit aims to support students to make material choices to achieve the desired outcomes of a brief. This is approached from the perspective of materials being fit for purpose; as defined by testing standards and properties, but also by consideration of the environmental impact and sustainability. Awareness of health & safety is considered alongside the need to meet legislative requirements. The topics covered in this unit include: health & safety; storage and use of materials; handling, and problems associated with misuse and unprotected use; environmental and sustainable consideration in material choices; and human comfort performance parameters. Material choice is developed through the understanding of testing procedures to establish conformity to standards and define performance properties. The performance of materials to satisfy regulations and provide appropriate comfort levels is addressed through design and calculations. Outcomes: By the end of this unit, students will be able to: 1. Review health & safety regulations and legislation associated with the storage, handling and use of materials on a construction site 2. Discuss the environmental and sustainability factors which can impact and influence the material choices for a construction project 3. Present material choices for a given building using performance properties, experimental data, sustainability and environmental consideration 4. Evaluate the performance of a given building in respect of its human comfort requirements

Year 3 & 4	BTEC Level 4 HNC in Construction and the Built Environment (Construction)
	Off-the-job training and assessment
	Science and Materials (Unit 3) Written assignment 1
	Science and Materials (Unit 3) Written assignment 2
	Construction Practice & Management (Unit 4) The unit compares and investigates small, medium and large construction companies within the market place and how construction processes, for development, have evolved. Apprentices will also explore how health & safety has evolved within the industry, including how the major stakeholders, from companies to site operatives, have embedded health & safety into their preferred areas of development and careers. In addition, students will explore Building Information Modelling and how it fits into construction processes/sequences ranging from domestic to large-scale and design and build projects. The knowledge from this unit will provide apprentices with the understanding of modern construction and management; the skills, management of people and projects, and how health & safety have changed the perception of the construction industry. Outcomes: By the end of this unit, students will be able to: 1. Describe the construction industry with reference to company structures and other activities 2. Explain different types of construction companies in the market and their relationships within the tendering process 3. Discuss the key stages in a construction project, and how Building Information Modelling informs the different stages 4. Analyse how the construction industry has developed suitable collaboration strategies in support of greater recognition of health & safety
	Construction Practice & Management (Unit 4) Written assignment 1
	Construction Practice & Management (Unit 4) Written assignment 2
	Legal & Statutory Responsibilities in Construction (Unit 5) The construction industry is perceived to be a dangerous, noisy and disruptive area of work which impacts on the use of land and buildings. It is, however, governed by a range of areas of law to ensure that professionals; such as architects, quantity surveyors and contractors, comply with legal and statutory requirements to design, construct and deliver buildings and alterations using safe working practices and utilising land appropriately. This unit will introduce the different areas of law that are relevant to the construction industry throughout the development process. This includes applying for planning approval to undertake construction activities and using building control regulations to evaluate building design and alterations at the preconstruction stage. The unit will explore the laws of occupiers' liability, trespass and nuisance to manage construction activities on-site, and the legal aspects of the sale and leasing process involved in the disposal of buildings; using the law of contract and land law. Topics included in this unit are:

Year 3 & 4	BTEC Level 4 HNC in Construction and the Built Environment (Construction)
	Off-the-job training and assessment
	planning law, building control regulations, insurance, the law of tort and the law of contract and land law. On successful completion of this unit students will be able to apply legal and statutory requirements and processes common to the construction sector. Outcomes: By the end of this unit, students will be able to: 1. Examine the process used to obtain planning permission for the construction and alteration of buildings 2. Discuss the processes and regulations used to control design and to ensure safe buildings 3. Assess the laws used to ensure that construction sites operate safely and consider adjoining land-users 4. Analyse how the law of contract and land law are used to sell and lease land and buildings.
	Legal & Statutory Responsibilities in Construction (Unit 5) Written assignment 1
	Legal & Statutory Responsibilities in Construction (Unit 5) Written assignment 2
	Construction Information (Drawing, Detailing, Specification) (Unit 6) Through this unit apprentices will develop their awareness of different types of construction information and their uses in the process. Apprentices will engage in the production, reading and editing of construction information, in order to understand how this information informs different stages of the process. Using industry standard tools and systems, apprentices will consider the ways that information may be shared and, through this, the value of collaboration in the information process. Topics included in this unit are: construction drawing, detailing, Computer Aided Design (CAD), Building Information Modelling (BIM), schedules (door, window, hardware, etc.), specifications, schedules of work, bills of quantities and information distribution and collaboration. Outcomes: By the end of this unit, students will be able to: 1. Evaluate different types of construction information in the context of diverse project types 2. Develop construction drawings, details, schedules and specifications in support of a given construction project 3. Interpret different types of construction information in order to explain a construction project 4. Assess ways in which construction professionals collaborate in the production of construction information
	Construction Information (Drawing, Detailing, Specification) (Unit 6) Written assignment 1 - Construction Information Production
	Construction Information (Drawing, Detailing, Specification) (Unit 6) Written assignment 2 - Construction Information Review

Year 3 & 4	BTEC Level 4 HNC in Construction and the Built Environment (Construction)
	Off-the-job training and assessment
	Surveying, Measuring & Setting Out (Unit 7) This unit explores the techniques used to set up controls and conduct topographic surveys. It also covers communication of results and methods of setting out structures. Outcomes: By the end of this unit, students will be able to: 1. Undertake a survey to establish a station network for horizontal and vertical control 2. Explain the process of undertaking a topographic survey 3. Apply industry standard techniques in the production, transferring and staking out of co-ordinates of multiple construction elements 4. Prepare a report on the causes of errors and techniques to improve accuracy, including the use of digital data
	Surveying, Measuring & Setting Out (Unit 7) Written assignment 1 Undertaking a survey to establish a station network for horizontal and vertical control and explaining the process of undertaking a topographic survey
	Surveying, Measuring & Setting Out (Unit 7) Written assignment 2 Application of industry standard techniques in the production, transferring and staking out of co-ordinates of multiple construction elements and subsequently preparing a report on causes of error and techniques used to improve accuracy
	1 of the following 3 units will be delivered, based on the unit most relevant to the course cohort
	Option 1: Principles of Refurbishment (Unit 15) There are buildings all over the world of different types, styles, ages and conditions. Once a building has been built there comes a need to maintain and update the property; to keep it fit for the intended purpose. Refurbishment is a broad term that covers adaptation, alteration and extension. The value of refurbishment to the construction industry is significant; with nearly half of the total value of construction coming from work to existing buildings. With a reduction of available land, legislative changes, and a drive for increased sustainability, the need to understand refurbishment has never been as prevalent as it is today. This unit will allow students an opportunity to analyse the underpinning concepts of refurbishment and the options available. Students will be able to use construction knowledge from other units and apply it to a refurbishment project, taking into account the key factors that influence a scheme. Outcomes: By the end of this unit, students will be able to: 1. Explain the need for refurbishment 2. Compare different options for refurbishment projects 3. Analyse the refurbishment process 4. Prepare a proposal for a refurbishment scheme

Year 3 & 4	BTEC Level 4 HNC in Construction and the Built Environment (Construction)
	Off-the-job training and assessment
	Assessment methods (Unit 15) Compare different options for refurbishment projects Analyse the refurbishment process Prepare a proposal for a refurbishment scheme
	Option 2: Site Supervision & Operations (Unit 21) Through this unit students will develop the skills and techniques necessary to manage the people and processes of a building site, ensuring the quality of work, safe working practices and the interactions of different 'trades'. Topics covered in this unit include: evaluating construction information, monitoring quality, identifying and notifying of defects, sustainable methods of construction, site safety regulations, Health & Safety regulations, people management, performance management, site meetings, contractor and sub-contractor relations. Outcomes: By the end of this unit, students will be able to: 1. Evaluate construction information to determine quality requirements 2. Prepare a report on defects and recommended remedial actions 3. Assess a pre-construction Health & Safety plan for a given construction project, in relation to local and national regulations 4. Discuss methods for evaluating and improving the performance of site staff
	Assessment methods (Unit 21) Evaluate construction information to determine quality requirements Prepare a report on defects and recommended remedial actions
	Option 3: Contracts & Management (Unit 23) The overall aim of this unit is to provide students with a working knowledge of contracts, so they can manage a project team in accordance with the agreed terms and conditions of the contract. The principle person responsible for this is often the quantity surveyor and it is their responsibility to ensure compliance with the conditions of the contract. Outcomes: By the end of this unit students will be able to: 1. Discuss the requirements for a contract in meeting stakeholders' interests 2. Determine the criteria for the selection of a contract 3. Analyse different types of contract and their application to the built environment 4. Select and prepare an appropriate form of contract for a specific project, specifying the terms and conditions

Year 3 & 4	BTEC Level 4 HNC in Construction and the Built Environment (Construction)
	Off-the-job training and assessment
	Assessment methods (Unit 23) Discuss the requirements for a contract in meeting stakeholders' interests Determine the criteria for the selection of a contract Analyse different types of contract and their application to the built environment Select and prepare an appropriate form of contract for a specific project, specifying the terms and conditions.
	Individual Project (Unit 1) The aim of this unit is to support apprentices in using and applying the knowledge and skills they have developed through other areas of their studies to complete and present an individual project. In addition, this unit will provide apprentices with key study skills that will support them in further study. Apprentices will be able to identify, define, plan, develop and execute a successful project by working through a clear process. They will develop a project brief; outlining a problem that requires a solution, as well as a project specification, the specific requirements of which the final outcome must meet. They will research the problem, undertaking a feasibility study, and consider a range of potential solutions using critical analysis and evaluation techniques to test, select and contextualise their preferred solution. Apprentices will provide a work and time management plan, keeping a diary of all activities, reflecting on their process and their learning throughout the project. Outcomes: By the end of this unit, students will be able to: 1. Formulate a project that will provide a solution to an identified problem 2. Manage a project within agreed timescales and specification; documenting the process throughout 3. Evaluate potential project management solutions 4. Produce a project report and deliver a presentation of the final project outcomes
	Individual Project (Unit 1) Project
	Project Management (Unit 24) The aim of this unit is to explore theories and practices relating to project management, the project manager role, and managing stakeholders throughout the project process. Topics covered in this unit include: - project management as a discipline and suitability for a range of construction industry activities; - project stakeholder types and their management; project manager roles and responsibilities; - project management plans Outcomes: By the end of this unit, students will be able to:

Year 3 & 4	BTEC Level 4 HNC in Construction and the Built Environment (Construction)
	Off-the-job training and assessment
	1. Compare project management theories, practices and standards; and their appropriateness for different types of project 2. Discuss the roles of the major stakeholders in a construction project and how their needs are managed by the project management team 3. Specify the attributes and competencies of a project manager in leading complex construction works 4. Develop a project strategy plan that defines the key policies, procedures and priorities for a complex construction project.
	Assessment methods (Unit 24) Compare project management theories, practices and standards; and their appropriateness for different types of project Discuss the roles of the major stakeholders in a construction project and how their needs are managed by the project management team Specify the attributes and competencies of a project manager in leading complex construction works Develop a project strategy plan that defines the key policies, procedures and priorities for a complex construction project

Year 5	BTEC Level 5 HND in Construction and the Built Environment (Construction Management)
	Off-the-job training and assessment
	Management for Complex Building Projects (Unit 25) This unit is designed to focus on factors that are involved in the relationship between the complexity of large construction projects and the management strategies required to plan, organise and co-ordinate such projects. This unit also supports students to analyse total Health & Safety management in the light of new and existing legislation and construction contracts, and the impact it has on issues surrounding construction management. Topics included in this unit are: - management strategies, contract planning, pre-project phase, planning and design, contract selection phase, project operations, project closeout and termination phase, management team, organisational systems, cash flow/funding. Outcomes: By the end of this unit, students will be able to: 1. Specify the management strategies that may apply at the commencement of construction projects 2. Review the main functions of construction management and team management in relation to complex buildings 3. Analyse the professional relationships involved in managing, planning and coordinating complex projects 4. Discuss contract planning techniques for complex building projects, utilising systems, technologies and supporting instruments for planning/management

Year 5	BTEC Level 5 HND in Construction and the Built Environment (Construction Management)
	Off-the-job training and assessment
	Assessment methods (Unit 25) Specify the management strategies that may apply at the commencement of construction projects Review the main functions of construction management and the management team in relation to complex buildings Analyse the professional relationships involved in managing, planning and co-ordinating complex projects Discuss contract planning techniques for complex building projects, utilising systems, technologies and supporting instruments for planning/management
	Alternative methods of Construction (Unit 35) Introduction The construction industry seeks to be dynamic and forward thinking, but in reality, most buildings are still constructed using many of the same materials and processes that have been utilised for centuries. While there is accumulated knowledge in the use of 'tried-and-tested' methods, these are not always the most efficient or cost effective. Combined with this is the fact that the construction industry is one of the largest contributors to CO2 emissions and is under increasing pressure, and legislation, to improve its processes and practices. However, the industry also faces other challenges. As one of the most important sectors of the global economy, it is imperative that construction is able to meet the demands for housing, office, institutional and commercial development. Continuing to build, using traditional methods, will not be sufficient. One of the ways in which the sector is exploring how to address sustainability and increase productivity is through the development and implementation of alternative forms of construction. Outcomes: By the end of this unit students will be able to: 1. Examine how the construction industry impacts on the environment, and how changes in the industry can create broader social and economic benefits 2. Explore alternative construction methods which are fit for purpose in a given context 3. Discuss government policy implications and Health & Safety constraints associated with alternative construction methods 4. Present a design proposal, utilising a selected alternative construction method
	Assessment methods (Unit 35) Examine how the construction industry impacts on the environment, and how changes in the industry can create broader social and economic benefits Explore alternative construction methods which are fit for purpose in a given context Discuss government policy implications and Health & Safety constraints associated with alternative construction methods Present a design proposal, utilising a selected alternative construction method, and explain how it is 'fit for purpose' in the given context

Year 5	BTEC Level 5 HND in Construction and the Built Environment (Construction Management)
	Off-the-job training and assessment
	1 of the following 2 units will be delivered, based on the unit most relevant to the course cohort
	Option 1: Surveying for Conservation, Renovation and Refurbishment (Unit 41) This unit will introduce students to the process, techniques and underpinning knowledge required to undertake a survey of a building. The unit will focus on surveying the condition of the fabric rather than a measured survey. However, where appropriate, consideration will be given to taking measurements to record the condition of the building. The unit will consider the different styles and methods of construction, how to analyse them and how they typically fail over time. The unit takes a practical approach, drawing on the initial learning and knowledge and applying it to surveying a property and producing a professional, detailed survey report for a variety of end users. Outcomes: By the end of this unit students will be able to: 1. Examine an existing building to determine its character 2. Investigate methods of building construction 3. Assess mechanisms of failure and deterioration in historic buildings 4. Produce a building survey report in support of a proposed conservation, renovation or refurbishment scheme.
	Assessment methods (Unit 41) Assess an existing building to determine its character Investigate methods of building construction Assess mechanisms of failure and deterioration in historic buildings Produce a building survey report in support of a proposed conservation, renovation or refurbishment scheme
	Option 2: Maintenance and Operations (Unit 45) The aim of this unit is to provide students with background knowledge and understanding of maintenance and operations required in relation to the safe and efficient use of buildings; within both specific contexts and the wider environment. Students will examine the different maintenance elements and materials available, the varied approaches to managing the processes of maintenance, the impact of planning and scheduling, how maintenance operations integrate with the wider environment and how these impact on core business activities. Students will explore the relationship of maintenance and operations as an integral part of the building lifecycle ('from cradle to grave') and how the wider external business environment influences the way in which maintenance and operations are managed. Outcomes: By the end of this unit students will be able to: 1. Discuss the different industry sectors involved in maintenance, specific material elements and materials used in the maintenance of buildings 2. Compare the different types of maintenance management available and how they interrelate 3. Demonstrate how Building Information Modelling assists in managing maintenance and operations effectively and efficiently 4. Assess how maintenance and operations are managed as part of a wider business management strategy.

Year 5	BTEC Level 5 HND in Construction and the Built Environment (Construction Management)
	Off-the-job training and assessment
	Assessment methods (Unit 45) Discuss the different industry sectors involved in maintenance, specific material elements and materials used in the maintenance of buildings Compare the different types of maintenance management available and how they interrelate Demonstrate how Building Information Modelling assists in managing maintenance and operations effectively and efficiently Assess how maintenance and operations are managed as part of a wider business management strategy
	Group project (Unit 22) Through this collaborative project-based unit, students will explore how to define roles within a collaborative team, recognising the skills (and 'skills gaps') of each member of the group. Together students will work to develop a construction project; based on their research and analysis, in response to the Pearson-set 'theme'. **Outcomes:** By the end of this unit, students will be able to: 1. Assess individual and group skills in order to allocate roles within a collaborative team 2. Plan a construction project, based on the Pearson-set theme, in collaboration with others to ensure good practice in resource management, staffing and project scheduling 3. Prepare tender documentation; undertaking work appropriate to a defined role within a team 4. Evaluate own work, and the work of others, in a collaborative team
	Assessment methods (Unit 22) Evaluate construction information to determine quality requirements Prepare a report on defects and recommended remedial actions Assess a pre-construction Health & Safety plan for a given construction project, in relation to local and national regulations Discuss methods for evaluating and improving the performance of site staff
	Personal Professional Development (Unit 38) As a professional, learning is a continuous and lifelong process. Within the construction industry there are constant changes in technology, materials, processes, legislation and practice. In order to remain up-to-date, it is necessary to recognise the potential of both structured, classroom-based learning and the learning that is gained through professional activities 'on the job'. This unit provides a framework in which students have the opportunity to reflect upon and contextualise the learning that they gain from working within the industry. In coordination with tutors and their employer, students will define the scope, duration and content of their expected work-based learning experience. Throughout the period of their work-based learning experience, students will be expected to record and reflect upon their own learning. **Outcomes:** By the end of this unit, students will be able to:

Year 5	BTEC Level 5 HND in Construction and the Built Environment (Construction Management)
	Off-the-job training and assessment
	1. Assess personal learning needs and opportunities within the context of employment 2. Plan and manage own personal learning journey, through consultation with employer and tutor/instructor 3. Record personal progress and the feedback of others; responding as appropriate to own future development 4. Evaluate own learning, based on personal experience and comments from others, in order to plan for the future
	Assessment methods (Unit 38) Assess personal learning needs and opportunities within the context of employment Plan and manage own personal learning journey, through consultation with employer and tutor/instructor
End	Successful completion of the attached qualifications