

Employer's Guide to:

**The Higher Apprenticeship in
Sustainable Built Environment**

Leicester College Construction

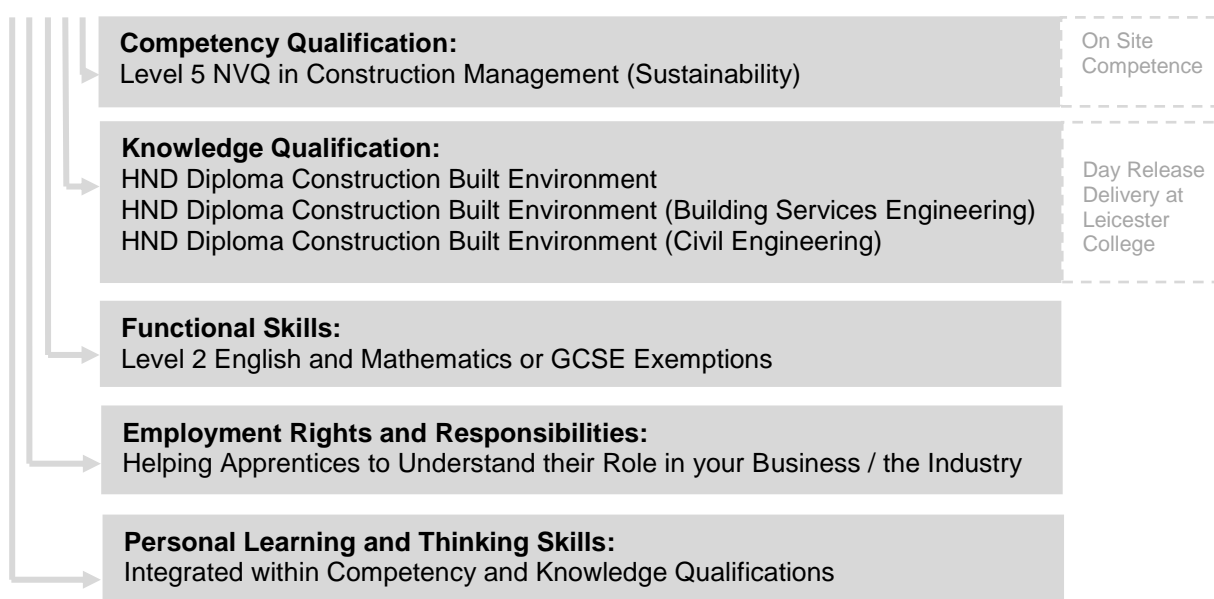
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What is The Higher Apprenticeship in Sustainable Built Environment?

The Higher Apprenticeship (HA) in Sustainable Built Environment combines professional university level qualifications with those high level practical skills your business needs to prosper. The HA is extremely dynamic in nature and will demonstrate modern methods of design, construction and maintenance of the built environment in action. The qualification consists of five elements:

Higher Apprenticeship in Sustainable Built Environment



Three specific pathways are on offer to meet industry requirements; Construction and the Built Environment (CBE), Building Services Engineering (BSE) and Civil Engineering (CE). Whatever the specialist route, apprentices will have the opportunity to:

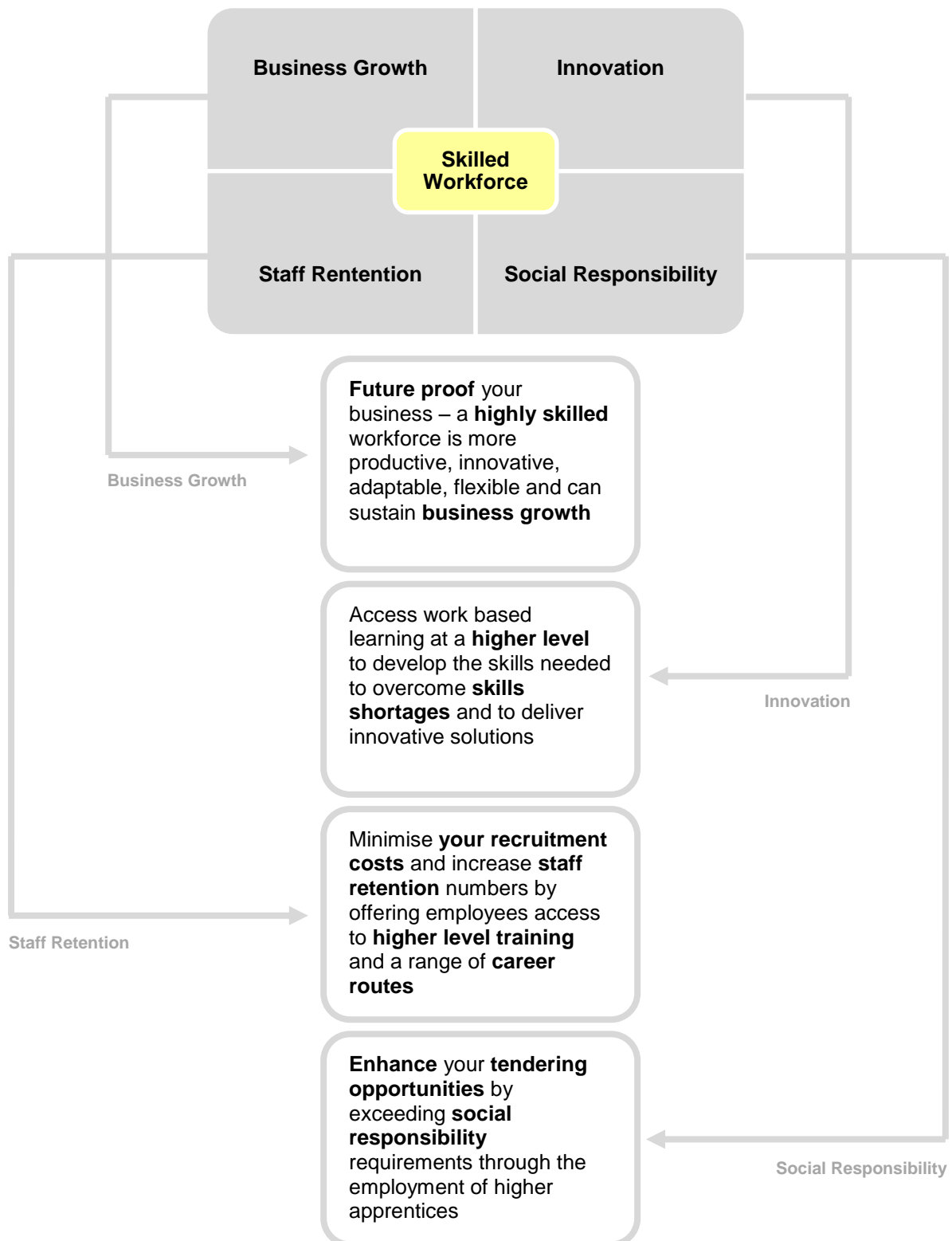
- ✓ Apply critical reasoning and analysis technique to solve built environment and engineering problems
- ✓ Adhere to industry standards and appropriate codes of practice
- ✓ Develop personal and business skills to confidently contribute to the demands of a professional environment
- ✓ Apply for the CSCS black card for manager occupations

Developed in collaboration with employers, colleges, universities and the Sector Skills Council, the HA in Sustainable Built Environment is sure to meet the needs of businesses in the industry, both now and in the future.

Professional bodies including The Chartered Institution of Building Service Engineers, The Royal Institution of Chartered Surveyors and The Institution of Civil Engineers have also been consulted to ensure that your Higher Apprentice is able to gain professional institution recognition, as appropriate to the pathway selected.

How will your Business Benefit?

HAs will allow your business to harness new talent to develop a highly skilled workforce. Not only will this give your business that professional edge, but a skilled workforce will also provide the benefits of:



HA Career Pathways:

The HA provides the vocational knowledge and skills necessary for careers in a variety of disciplines to ensure that business needs are met across all industries. This is highlighted below:

Career Pathways	
Job Title:	Corresponding NVQ Units:
Architect	Developing Detailed Project Designs in Construction and the Built Environment
Building Services Engineer	Designing Sustainable Building Services Engineering Systems
Building Surveyor	Contract Valuations and Claims in Construction and the Built Environment
Contracts Manager	Optimising the Supply Chain in Construction and the Built Environment
Environment Manager	Manage the Environmental Impact of Work Activities
Estimator	Preparing and Evaluating Supply Chain Tenders in Construction
Health and Safety Manager	Maintaining Health, Safety and Welfare Systems in Construction and the Built Environment
Project Manager	Managing Physical Resources
Quantity Surveyor	Surveying in Construction and the Built Environment
Site Manager Site Engineer	Monitoring Projects in Construction and the Built Environment
Structural Engineer	Managing Tests in Construction and the Built Environment

Entry Details and Suitable Applicants

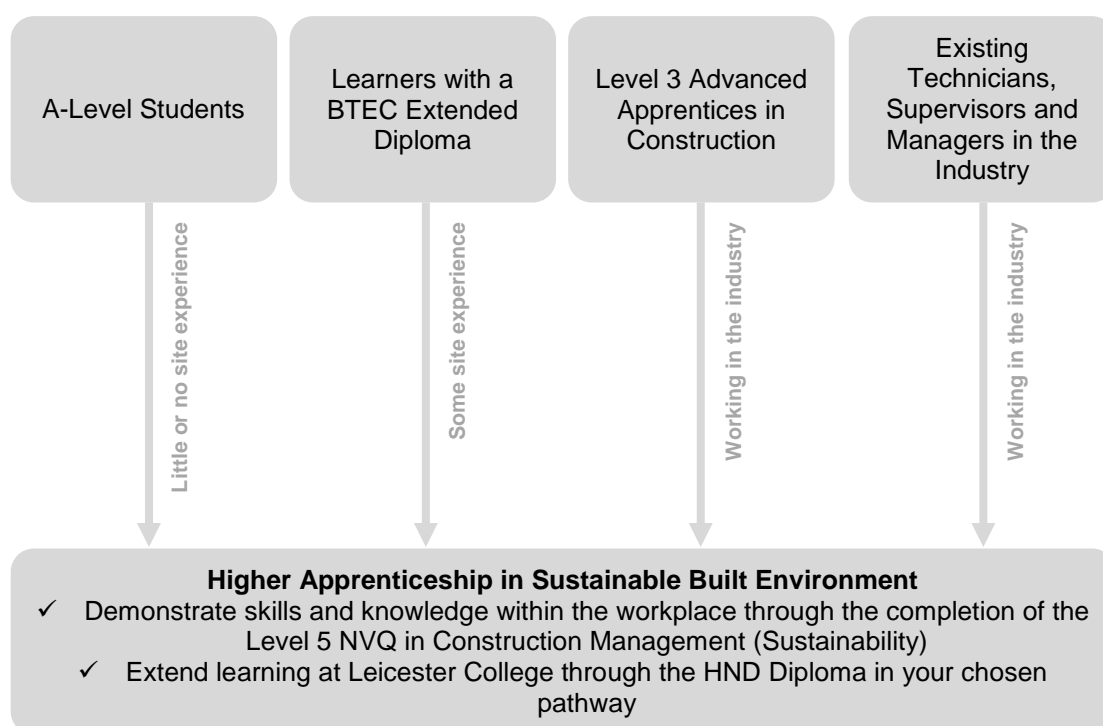
Candidate Entry Requirements:

Entry requirements for your candidate have been set to **one** of the following (or any other equivalent qualification) alongside employment with your company:

- ✓ BTEC Extended Diploma
- ✓ Level 3 Advanced Apprenticeship
- ✓ One A Level grade C or two at grade E (80 UCAS points)
- ✓ Subsidiary Diploma

Who Should Your Company Put Forward?

The HA is ideal for candidates interested in a technician or management role within your business or for existing employees that have not previously had the opportunity to acquire higher level qualifications:



For candidates that have recently completed their GCSEs or do not meet the entry requirements above, Leicester College can offer a progression pathway to then continue onto the HA if appropriate.

HA: The Costs, The Financial Support Available and The Team

Costs and Duration:

The following tuition fees will apply to register your apprentice on the HA programme:

- ✓ £2,000 per year of learning
- ✓ Approximately £6,000 over the course of the programme (up to 3 years depending on experience)

AGE Grant (Apprenticeship Grant for Employers):

40,000 grants, with a value of **£1,500**, are available from The National Apprenticeship Service to support you in recruiting Higher Apprentices. Qualifying criteria include:

- ✓ Your Higher Level Apprentice must be aged between 16 and 24
- ✓ You have not employed an apprentice in the last 12 months
- ✓ You employ less than 1000 employees
- ✓ You need some financial support in taking on an apprentice
- ✓ Further information is available at: www.leicestercollege.ac.uk/employers/apprenticeship-grant/

CITB – Construction Skills Grants:

If your company is registered with the CITB – Construction Skills, you may also be entitled to the following grant support:

- ✓ Technical and Professional Attendance Grant: £50 per day for off-the-job construction related courses of one year or more. This grant is payable to a maximum of £1750 per year.
- ✓ Vocational Qualification (VQ) Achievement Grant: £650 per achievement for VQs Level 4 and above.

Grant payment will vary depending on the circumstances of your apprentice(s).

Additional information is available from your CITB – Construction Skills adviser or by visiting www.cskills.org/levy-grant/claiming-grant

Meet the Team:

Construction HA Team			
Name:	Job Title:	Contact:	
		Email:	Tel:
Tony Ridgway	BDM		
Alan Simons	Lead Trainer		
Nigel Maddern	Lecturer		

HA Assessments: E Portfolios

For efficient and effective evidence management, Higher Apprentices will have access to OneFile – an online, learner owned e-portfolio system, designed not only to improve the learning experience but to also sustain employer engagement. Benefits of OneFile include:

- ✓ Instant access to assessment feedback
- ✓ Quicker completion of portfolios
- ✓ Better communications

Accessible 24 hours a day, 7 days a week, OneFile also includes the following features (*additional information available at www.onefile.co.uk*):

The screenshot shows the OneFile Demo Area interface. On the left, a sidebar lists navigation options: Home, Portfolio, Assessments, Progress, Tasks (1), Messages (2), and Resources. To the right of the sidebar, a list of features is provided with arrows pointing to the corresponding sections in the dashboard:

- Upload new/review existing evidence → Portfolio
- Review pending/completed assessments → Assessments
- Monitor progress against qualification units → Progress
- Tasks to be completed with instructions → Tasks (1)
- Message centre for tailored support → Messages (2)
- Useful resources to assist apprentices → Resources

The main dashboard area displays a welcome message, a progress bar for 'Edexcel Level 5 NVQ Diploma in Construction Management (Sustainability) (QCF) (Sep 2012) (Not yet registered)', and several interactive tiles: My Profile & CV, My Portfolio, Upload Evidence, Tasks, Messages, Witness Status, and Resources. At the bottom, an 'Assessment Team' section lists Ian Smeaton (Primary Assessor) and Idris Paxman (Primary Internal Verifier), both marked as 'Offline'.

Employer Benefits at a Glance:

Instantly monitor your Apprentice's Progress: You will now be able to easily track the progress of your apprentice against specific NVQ units (shown below) to (a) support performance reviews and (b) monitor communications with your assigned Trainer Assessor.

Edexcel Level 5 NVQ Diploma in Construction Management (Sustainability) (QCF) (Sep 2012)	GLH (295)	Credit Value (70)	Unit Progress	Actual	Target	Start Date	Anticipated Completion Date	Learner Signed Off	Assessor Signed Off	TV Signed Off
[Unit 01] Manage the Environmental Impact of Work Activities	10	5	<div><div></div></div>	44%	7%	07/11/2012	07/05/2013	Not signed off	Not signed off	Not signed off

Improve Efficiency: Apprentices will have the freedom to collate evidence (including images and audio and video recordings), submit work remotely, review resources and assessments and receive tailored support from the assessor via the built in messaging system – at any given time.

Level 5 NVQ in Construction Management (Sustainability)

Awarding Body: Edexcel

Minimum Credits to be Achieved: 64

Minimum Credits to be Achieved at Level 5 or Above: 39

Mandatory Units

Apprentices must complete all 5 units for a total of 38 credits

Unit:	Your apprentice will be able to show competence in:	Level:	Credit Value:
Manage the Environmental Impact of Work Activities	Assessing the environmental impact of their work	4	5
Maintaining Health, Safety and Welfare Systems in Construction and the Built Environment	Maintaining a safe working environment and reporting on health and safety procedures	5	10
Developing Working Relationships in Construction and the Built Environment	Developing and maintaining relationships with colleagues and formulating and reviewing their own personal development needs	5	8
Ensure Compliance with Legal, Regulatory, Ethical and Social Requirements	Complying with legal, regulatory, ethical and social requirements and making recommendations for corrections to ensure compliance	4	5
Monitoring Environmental Factors and Sustainability in Construction and the Built Environment	Monitoring the factors that make up environmental and sustainability in work related projects	5	10

Pathways

The remaining 26 credits can be achieved from one of the following pathways:

Pathway 1: Construction and the Built Environment (CBE)

Pathway 2: Building Services Engineering (BSE)

For details of the full qualification, please visit: [http://www.edexcel.com/migrationdocuments/QCF%20competencebased%20qualifications/Edexcel-L5-NVQ-Diploma-in-Construction-Management-\(Sustainability\)-\(QCF\).pdf](http://www.edexcel.com/migrationdocuments/QCF%20competencebased%20qualifications/Edexcel-L5-NVQ-Diploma-in-Construction-Management-(Sustainability)-(QCF).pdf)

Pathway 1: Construction and the Built Environment (CBE)

At least one unit must be achieved from the Mandatory CBE Pathway Group

The remaining credits can be achieved from either:

The Mandatory CBE Pathway Group

The Optional CBE Pathway Group

A combination of the Mandatory CBE Pathway Group and the Optional CBE Pathway Group

Mandatory CBE Pathway Group

Unit:	Your apprentice will be able to show competence in:	Level:	Credit Value:
Managing Performance in Construction and the Built Environment	Managing the performance of individuals and teams by monitoring, assessing and providing feedback against agreed objectives	5	12
Preparing and Evaluating Supply Chain Tenders in Construction	Understanding the tendering process and associated tender documentation in relation to supply chain tenders	5	12
Surveying in Construction and the Built Environment	Carrying out different surveys and understanding requirements	5	12
Developing Detailed Project Designs in Construction and the Built Environment	Preparing and revising designs and determining the factors which influence design	5	12
Work Scheduling and Procurement in Construction and the Built Environment	Developing schedules of work and procurement programmes for sector projects	5	12
Contract Valuations and Claims in Construction and the Built Environment	Applying contract valuations to construction projects and agreeing contract claims	5	12
Establish Risk Management Processes for an Organisation	Establishing and communicating a risk management process	5	6
Planning Conservation Activities in Construction and the Built Environment	Planning historical conservation activities and understanding influencing factors	5	12

Optional CBE Pathway Group

Unit:	Your apprentice will be able to show competence in:	Level:	Credit Value:
Providing Built Environment- Related Customer Service in the Workplace	Providing consistent customer service, resolving issues and monitoring customer needs and expectations	5	8
Innovation in Sustainable Construction	Understanding the importance of sustainable construction	5	10
Conduct a Quality Audit	Reporting on, evaluating and monitoring a quality audit	6	6
Manage Physical Resources	Identifying, obtaining, managing and reviewing the use of physical resources and their impact on the environment	4	3
Promote Equality of Opportunity, Diversity and Inclusion Across an Organisation	Understanding the benefits of and implementing changes to equality, diversity and inclusion policies and procedures	5	6
Promote the Use of Technology Within an Organisation	Develop, implement, monitor and review a technology strategy for the organisation	5	6
Support the Culture of an Organisation	Understanding organisational culture	6	5
Formulating Project Requirements in Construction and the Built Environment	Understanding the factors involved in formulating client requirements and using this information to design a procurement strategy	5	12
Optimising the Supply Chain in Construction and the Built Environment	Examining the supply chain to accurately complete supplier scheduling	5	12
Chairing Meetings in the Built Environment	Chairing meetings, analysing information and making decisions	5	8
Monitoring Projects in Construction and the Built Environment	Establishing an accurate profile of programme progress and how to manage project variations	5	12
Managing Tests in Construction and the Built Environment	Managing tests, recording results and presenting results in Construction and the Built Environment	5	14
Plan and Manage a Project	Clarifying the scope and objectives of a project, developing a project plan and consulting and agreeing the plan with others	4	8
Manage a Tendering Process	Managing a tender process including developing specifications and tender guidelines	4	4
Using Specialist Software in Construction and the Built Environment	Using specialist software to solve complex problems	5	12

Pathway 2: Building Services Engineering (BSE)

At least one unit must be achieved from the Mandatory BSE Pathway Group

The remaining credits can be achieved from either:

The Mandatory BSE Pathway Group

The Optional BSE Pathway Group

A combination of the Mandatory BSE Pathway Group and the Optional BSE Pathway Group

Mandatory BSE Pathway Group

Unit:	Your apprentice will be able to show competence in:	Level:	Credit Value:
Designing Sustainable Building Services Engineering Systems	Understanding design briefs, solutions, technical designs and specifications when designing BSE systems	5	12
Commissioning Building Services Engineering Systems	Monitoring and testing building engineering systems, diagnosing system faults and rectifying requirements to correctly commission systems for effective operation	5	14
Analysing and Monitoring Building Services Engineering Controls	Monitoring and interrogating building services engineering control systems providing appropriate data to diagnose systems faults and to optimise systems for effective operation	5	12

Optional BSE Pathway Group

Unit:	Your apprentice will be able to show competence in:	Level:	Credit Value:
Providing Built Environment Related Customer Service in the Workplace	Providing consistent customer service, resolving issues and monitoring customer needs and expectations	5	8
Innovation in Sustainable Construction	Understanding the importance of sustainable construction	5	10
Conduct a Quality Audit	Reporting on, evaluating and monitoring a quality audit	6	6
Manage Physical Resources	Identifying, obtaining, managing and reviewing the use of physical resources and their impact on the environment	4	3
Promote Equality of Opportunity, Diversity and Inclusion Across an Organisation	Understanding the benefits of and implementing changes to equality, diversity and inclusion policies and procedures	5	6

Unit:	Your apprentice will be able to show competence in:	Level:	Credit Value:
Promote the Use of Technology Within an Organisation	Develop, implement, monitor and review a technology strategy for the organisation	5	6
Support the Culture of an Organisation	Understanding organisational culture	6	5
Managing Performance in Construction and the Built Environment	Managing the performance of individuals and teams by monitoring, assessing and providing feedback against agreed objectives	5	12
Formulating Project Requirements in Construction and the Built Environment	Understanding the factors involved in formulating client requirements and using this information to design a procurement strategy	5	12
Preparing and Evaluating Supply Chain Tenders in Construction	Understanding the tendering process and associated tender documentation in relation to supply chain tenders	5	12
Surveying in Construction and the Built Environment	Carrying out different surveys and understanding requirements	5	12
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Planning Conservation Activities in Construction and the Built Environment	Planning historical conservation activities and understanding influencing factors	5	12
Chairing Meetings in the Built Environment	Chairing meetings, analysing information and making decisions	5	8
Monitoring Projects in Construction and the Built Environment	Establishing an accurate profile of programme progress and how to manage project variations	5	12
Managing Tests in Construction and the Built Environment	Managing tests, recording results and presenting results in Construction and the Built Environment	5	14
Plan and Manage a Project	Clarifying the scope and objectives of a project, developing a project plan and consulting and agreeing the plan with others	4	8
Manage a Tendering Process	Developing specifications and tender guidelines	4	4
Using Specialist Software	Using specialist software to solve complex problems	5	12

Level 5 HND Diploma in Construction and the Built Environment

Awarding Body: Edexcel

Mandatory Units

Unit:	On completion of this unit, your apprentice will be able to:	Level:	Credit Value:
Design Principles and Application for Construction and the Built Environment	Understand planning and design and the impact of both environmental factors and technology on design and production	4	15
Science and Materials for Construction and the Built Environment	Understand construction materials in terms of their properties, use and structure	4	15
Applied Mathematics for Construction and the Built Environment	Apply analytical methods to construction and engineering problems	4	15
Management Principles and Application for Construction and the Built Environment	Understand the sector in terms of its structures, activities, management techniques and procurement procedures	5	15
Group Project in the Construction Industry	Devise and implement a project including scheme of work and be able to evaluate and present the group project	5	20
Health, Safety and Welfare for Construction and the Built Environment	Understand health, safety and welfare legislation applicable to the industry	4	15
Technology of Complex Buildings	Understand the construction of multi-storey buildings and the alteration, remediation and safe demolition of complex structures	5	15
Law and Contract for Construction and the Built Environment	Understand the principles and procedures of legislation as applied to the sector as well as the liabilities of parties in construction contracts	4	15
Building Services Design, Installation and Maintenance in Construction	Understand the design and installation of space heating, ventilation, air conditioning and disposal systems, lifts and escalators and the issues associated with the maintenance of building services	4	15
Conversion and Adaptation of Buildings	Produce and use specifications, drawings and design plans to modify existing buildings	5	15
Production Management for Construction	Understand the principles of site management including resource management, cost forecasting and effective communications	5	15

Construction Methods and Design Solutions	Understand issues, practices and modern methods of construction to support design processes and solutions	5	15
Unit:	On completion of this unit, your apprentice will be able to:	Level:	Credit Value:
Site Surveying Procedures for Construction and the Built Environment	Understand the principles of site surveying and the use of surveying instruments available	4	15
Computer-aided Design for Construction	Produce 2D drawings using industry standard CAD software	4	15
Personal and Professional Development	Take responsibility for, implement and review own personal and professional development	5	15
Research Project	Formulate a research specification, implement the research project and present the research outcomes	5	20

Level 5 HND Diploma in Construction and the Built Environment (Building Services Engineering)

Awarding Body: Edexcel

Mandatory Units

Unit:	On completion of this unit, your apprentice will be able to:	Level:	Credit Value:
Design Principles and Application for Construction and the Built Environment	Understand planning and design and the impact of both environmental factors and technology on design and production	4	15
Applied Mathematics for Construction and the Built Environment	Apply analytical methods to construction and engineering problems	4	15
Management Principles and Application for Construction and the Built Environment	Understand the sector in terms of its structures, activities, management techniques and procurement procedures	5	15
Group Project in the Construction Industry	Devise and implement a project including scheme of work and be able to evaluate and present the group project	5	20
Health, Safety and Welfare for Construction and the Built Environment	Understand health, safety and welfare legislation applicable to the industry	4	15
Applied Mathematics for Construction and the Built Environment	Apply analytical methods to construction and engineering problems	4	15
Building Management Systems for Building Services Engineering	Understand the management and control requirements of buildings and design business management system installations	4	15
Project Management for Building Services Engineering	Understand contract management principles, and their application within building services engineering, with the skills needed to produce tenders and estimates	5	15
Application of Scientific Principles to Building Services Engineering	Understand elements of control systems, AC networks and the skills needed to determine heat energy transfer rates, energy losses and effects of sound and vibration	4	15
Research Project	Formulate a research specification, implement the research project and present the research outcomes	5	20
Low Pressure Hot Water Heating for Non-domestic Buildings	Analyse the need for, and the design and specification of, low pressure hot water heating installations for non-domestic buildings	4	15

Unit:	On completion of this unit, your apprentice will be able to:	Level:	Credit Value:
Electricity and Lighting for Building Services Engineering	Design electrical power installations, lighting installations and fire protection systems, in compliance with legislation and standards	4	15
Piped Distribution Services for Non-domestic Buildings	Design cold and hot water, mechanical fire fighting and suppression, and fuel, industrial and mechanical gas installations for non-domestic buildings	4	15
Energy Utilisation and Efficiency for Building Services Engineering	Understand how energy utilisation in buildings impacts on the environment and ways to improve the energy efficiency of buildings	5	15
Power Supplies for Building Services Engineering	Understand the principles of AC power supply and the skills required to provide high voltage supplies to complex buildings	5	15
Personal and Professional Development	Take responsibility for, implement and review own personal and professional development	5	15