Purpose Statement

Name of regulated qualification	
QAN: 603/1216/6	**Title: Pearson BTEC Level 3 National Extended Diploma in Civil Engineering (1080 GLH)**

Overview

The construction sector

Construction is a very important global industry and is worth £90 billion annually to the UK economy. At technician level and beyond, there is a diverse range of career pathways, with established professional entry and development routes in civil engineering, building services engineering, design/architecture and construction supervision/management. Currently, qualified construction technicians, managers and professionals are highly sought after in the UK industry, with demand for a greater number of professionals to implement and lead low-carbon and sustainable building projects in an efficient, cost-effective way.

Within construction, and indeed the wider UK economy, the role of the civil engineer is vital in that they are concerned with the design, building and maintenance of major public infrastructure such as bridges, roads and water supply. Civil engineering technicians could become involved in major infrastructure projects dealing with the challenges of the natural environment, such as building high speed rail links, or tunnelling with projects such as the Thames Tideway scheme.

Who is this qualification for?

The **Pearson BTEC Level 3 National Extended Diploma in Civil Engineering** is intended as a Tech Level qualification, equivalent in size to 3 A Levels and, as such, is designed as a two-year full-time programme of study. It is designed to meet the Technical Baccalaureate (Tech Bacc) measure, if you study it alongside a Level 3 mathematics qualification and the Extended Project Qualification (EPQ). It allows you to develop a substantial core of knowledge, to study in depth a full range of optional units of your choice and to develop the broader skills highly valued by higher education institutions, such as critical thinking, and the range of written and verbal communications required in the civil engineering sector.

The qualification would suit you if you are studying full time over a period of two years and want to pursue a career in construction, proceed directly to employment as a technician or progress to higher education. The qualification is intended to meet the requirements for registration as a technician.

No prior study of the sector is needed, but you should normally have a range of achievement at level 2, in GCSEs or equivalent qualifications, including English, mathematics and science.

What does the qualification cover?

The content of this qualification has been developed in consultation with employers and professional bodies to ensure that it is appropriate for those interested in working in the sector. In addition, higher education representatives have been involved to ensure that it fully supports entry to the relevant range of specialist degrees.

The qualification provides the knowledge, understanding and skills that will allow you to progress to further education, or directly to employment or an apprenticeship in the construction sector.

There are eight mandatory units, which cover the following aspects of construction:

- construction principles
- construction design
- tendering and estimating
- health and safety in construction
- construction technology
- site engineering for construction
- construction in civil engineering
- further mathematics for construction.

The mandatory units cover foundation mathematical and scientific principles, as applied in a construction context, introduce a range of technologies and their application in the industry, and include the principles of site engineering. The tendering and estimating unit covers the processes involved in costing and bidding for project contracts. The health and safety unit includes your personal responsibilities for health, safety and welfare, the industry and legislative requirements for health and safety, and the application of organisational processes and risk management to ensure compliance.

You will be able to choose a further seven optional units focusing on your areas of preferred specialism, at least two of which must be in a specialist civil engineering context; for example, principles of structural mechanics, public health engineering, specialist civil engineering work, and highway construction and maintenance.

Undertaking these seven units ensures you will acquire the depth of specialist skills and knowledge necessary to enter specialist civil engineering technician roles, or for direct entry into a degree without any supplementary study.

While taking this qualification, you will be required to engage with sector employers as part of your course. This could include work experience with an employer in the sector, where you will be given opportunities to develop practical skills in preparation for employment.

What could this qualification lead to?

Will the qualification lead to employment, if so, in which job role and at what level?

This qualification will prepare you for direct employment in the construction and built environment sector, and is ideal if you wish to enter a particular specialist area of work, such as:

- civil engineering technician
- civil engineering design technician
- civil engineering surveying technician
- construction project technician
- site engineering technician
- public health engineering technician
- construction contracting technician (estimator) in civil engineering
- trainee site supervisor in civil engineering.

The optional units give you the chance to learn about a particular aspect of construction in more detail, but because the mandatory content makes up two-thirds of the qualification, you will be prepared for all of these roles, whichever optional units you choose.

Will the qualification lead to further learning?

There are many roles in this sector where recruitment is at graduate level. The qualification carries UCAS points and is recognised by higher education providers as meeting admission requirements to many relevant courses, for example a:

- BSc (Hons) in Construction Management
- BSc (Hons) in Civil Engineering (this is likely to require taking the further maths unit as an option)
- HNC in Construction and the Built Environment (e.g. civil engineering pathway)
- HND in Construction and the Built Environment (e.g. civil engineering pathway).

You should always check the entry requirements for degree programmes at specific higher education providers.

Why choose this size of qualification?

If there are larger and/or smaller versions of this qualification, or it is available at different skills levels, why should you take this particular one?

The **Pearson BTEC Level 3 National Extended Diploma in Civil Engineering** is equivalent in size to 3 A Levels. It typically makes up the full two-year 16–19 study programme and allows you to focus your study on this sector with a view to progression to the workplace as a

technician, or to higher education.

The suite also includes the following qualifications.

The **Pearson BTEC Level 3 National Diploma in Civil Engineering**, which is equivalent in size to 2 A Levels. It typically makes up two-thirds of a 16–19 study programme. This size of qualification is ideal if you are currently working within the sector as an apprentice, or studying an NVQ or an A Level, such as maths, alongside.

The **Pearson BTEC Level 3 National Extended Certificate in Construction and the Built Environment**, which is equivalent in size to 1 A Level. It is ideal for you if you are interested in learning about the sector alongside other fields of study, with a view to progressing to an apprenticeship or other formal work-based learning. When taken alongside other relevant qualifications, such as a Pearson BTEC Level 3 National in Art and Design, it could prepare you for progression to other areas of construction, such as architecture, or to a wide range of higher education courses.

The **Pearson BTEC Level 3 National Foundation Diploma in Construction and the Built Environment**, which is equivalent in size to 1.5 A Levels. As a one-year programme, it is ideal for you if you are interested in learning about the sector alongside other fields of study, with a view to progressing to a more specialist area of construction, such as building services or civil engineering. You can progress to the Pearson BTEC Level 3 National Extended Diploma in Construction and the Built Environment in the second year.

The **Pearson BTEC Level 3 National Diploma in Construction and the Built Environment**, which is equivalent in size to 2 A Levels. It typically makes up two-thirds of a 16–19 study programme. This size of qualification is ideal if you are currently working within the sector, or studying an NVQ or an A Level, such as maths, alongside.

There are two further extended diplomas in the construction sector at this size: the **Pearson BTEC Level 3 National Extended Diploma in Construction and the Built Environment** and the **Pearson BTEC Level 3 National Extended Diploma in Building Services Engineering**. Both are equivalent in size to 3 A Levels and typically make up the full two-year 16–19 study programme. Qualifications at this size share a significant amount of core knowledge, but provide a range of specialist units appropriate to the job role that you are undertaking, or plan to enter, on completion. You should choose the National Diploma in Construction and the Built Environment, if, for example, you wish to become a construction contracting technician, design technician, architectural technician, quality controller, quantity surveying technician, or building control/planning technician in a general construction context. If you wish to specialise in civil or building services engineering, for example as building services engineering or civil engineering technicians, site supervisors or estimators in these disciplines, you should choose the appropriate National Extended Diploma.

For more detail about the other qualifications listed here, and the different progression opportunities they particularly support, please refer to their statements of purpose.

Who supports this qualification?

Professional or trade bodies

Institution of Civil Engineers

Technician Apprenticeship Consortium

Employers

AECOM

WSP Parsons Mouchel