Purpose Statement

Name of regulated qualification	
QAN: 603/1217/8	Title: Pearson BTEC Level 3 National Diploma in Civil Engineering (720 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 Diploma in Civil Engineering** is intended as a Tech Level qualification, equivalent in size to 2 A Levels and, as such, is designed to meet two-thirds of a full-time curriculum, or to be studied part time over two years. It allows you to develop significant core knowledge and offers an extensive range of optional areas to allow more depth in areas of your choice within civil engineering disciplines.

The qualification size allows it to be offered part time, or with other qualifications. It may be taken as a core component of the Tech Bacc, when studied alongside the other mandatory

components – Level 3 mathematics and the Extended Project Qualification (EPQ). You can also study this qualification while undertaking other formal training and working in the sector.

The qualification is also intended to underpin apprenticeships in civil engineering, for example the Civil Engineering for Technicians advanced apprenticeship, which is supported by the Institution of Civil Engineers for those working for civil engineering design consultancies.

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 essential knowledge, understanding and skills that will allow you to progress directly to employment, or to an apprenticeship in the construction sector.

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

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

The mandatory units cover foundation mathematical, design 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 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 three optional units focusing on your areas of preferred specialism – at least one of these 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. The specialist skills and knowledge gained in studying these units, will be needed as part of your wider work in civil engineering or for progression to further 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.

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 contributing to meeting the admission requirements to many relevant courses, if taken with an additional Level 3 qualification such as A Level mathematics or science. For example, a:

- BSc (Hons) in Construction Management
- BSc (Hons) in Civil Engineering
- 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 Diploma in Civil Engineering** 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 mathematics, alongside.

The suite also includes the following qualifications.

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; or to the Pearson BTEC Level 3 National Extended Diploma in Construction and the Built Environment, or the Pearson BTEC Level 3 National Extended Diploma in Building Services Engineering.

There are two further diplomas in the construction sector at this size: the **Pearson BTEC Level 3 National Diploma in Construction and the Built Environment** and the **Pearson BTEC Level 3 National Diploma in Building Services Engineering**. Both are equivalent in size to 2 A Levels and typically make up two-thirds of a 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 an estimator, buyer, project technician, site technician or trainee supervisor without a particular specialism. If however you wish to specialise in civil or building services engineering, for example as building services engineering or civil engineering technicians, you should choose the appropriate National Diploma in these disciplines.

Additionally, there are three extended diplomas in this suite:

- Pearson BTEC Level 3 National Extended Diploma in Construction and the Built Environment
- Pearson BTEC Level 3 National Extended Diploma in Civil Engineering
- Pearson BTEC Level 3 National Extended Diploma in Building Services Engineering.

These extended diplomas are each equivalent in size to 3 A Levels and each one typically makes up the full two-year 16–19 study programme, allowing you to focus your study on this sector with a view to progression to the workplace as a technician, or to higher education.

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