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Foundation Degree Framework Specification for Construction Operations Management

**For providers producing their own
Foundation Degrees and detailed programme
specifications in this area**

VERSION 1

Draft 5 – September 2010

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Updating

This document was prepared in Summer 2010 and reflects the national political, educational and industry contexts at that time. It will be updated online by ConstructionSkills and new versions produced as needed, to include latest information in relevant sections. So please check for the most current version before use.

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1. INTRODUCTION

1.1 Foundation degrees

Foundation degrees (Fds) are higher education qualifications which combine academic study with work-based learning (WBL). They are at Level 5 of the Framework for Higher Education Qualifications (FHEQ) [1] - equivalent in level to the first two years of a full time honours degree.

An Fd is both a stand-alone qualification and it also provides a basis for further study. This could take a number of different forms, including a period of study to achieve an honours degree (Level 6).

Upon completion, the Fd may also support individuals in the separate achievement of a relevant National Vocational Qualification (NVQ) Diploma in the new Qualifications and Credit Framework (QCF) [3], and in meeting the requirements of the Construction Skills Certification Scheme (CSCS) [4] and professional bodies [5]. Further details of these options are given in later sections of this document.

From an employer's perspective an Fd has many advantages. These are discussed more fully in Section 4.1, but can be summarized here as follows:

- The Fd makes a key contribution to a company's workforce development and qualifications portfolio at a point between craft and full professional levels.
- Being able to offer the Fd gives a positive edge in recruitment.
- The smooth transition to an extended period of study to achieve an honours degree acts as a motivator to staff who want to achieve to a higher level
- The WBL element promotes transfer and application of knowledge and skills in both directions to the benefit of both the business and the Fd programme. For example, WBL projects can be focused on company issues and challenges
- The academic underpinning of the Fd helps learners to develop confidence and knowledge which they can apply to their work tasks.

From a provider's perspective, offering Fds to meet the needs of the existing workforce is especially important where the pace of change means that employees need to continually develop new knowledge and skills. Regulatory changes, new technologies and the shortage of managerial skills create a demand for education and training to be delivered in a mode and timeframe that suits those in full-time employment and is responsive to industry's needs.

1.2 Guiding principles for Foundation degree development

Fds exhibit a number of 'defining characteristics' [2] which distinguish them from other types of award at the same level.

Many of these characteristics appear in other types of HE award. However, the distinctiveness of Foundation degrees is based upon all of these characteristics being present in an integrated form in one award. This is what differentiates Foundation degrees from other qualifications at Level 5. It also means that the Foundation degree curriculum and teaching strategy can be very different from the first two levels (Levels 4 and 5) of traditional three-year undergraduate campus based programmes in universities that lead directly to bachelor's degrees with honours.

The defining characteristics of an Fd are [2]:

Employer involvement - in the design, regular review and (preferably) also in delivery, assessment and monitoring of individuals in the workplace

Accessibility - increasing access and widening participation into higher education, with work based learning an integral part of the programme. Fds can increase accessibility by providing opportunities to 'earn and learn' through the valuable links provided by universities and colleges with their regional and local communities. The accreditation of prior learning, of either an experiential or certificated type (APE/CL), is a key tool in widening access – both for entry to an Fd and for later award of credit during the course – see below.

Articulation and Progression – providing access to higher education for learners from different starting points and with different entry qualifications. It is important that individuals are profiled before they start any Foundation degree so their existing knowledge, understanding and skills can be recognised by accreditation of prior experiential and/or certificated learning (APE/CL). Clear routes that allow individuals opportunities for successful progression within higher education, professional and industry certification schemes are also an important feature. This should include articulated progression to an extended period of study to achieve an honours degree and also cover requirements of professional and/or sector representative bodies.

Flexibility – on the part of the provider, the learner and the employer is central to many aspects of Foundation degrees. Flexibility may be needed in admission requirements, delivery modes, study patterns, progression routes, and links to professional institution, NVQ Diploma and honours degree requirements - taking into account individuals' diverse backgrounds and experiences.

Partnerships – between employers, Higher Education Institutions (HEIs), Further Education Colleges (FECs) and Sector Skills Councils (SSCs) are central to the concept of Foundation degrees. It is important that partnership agreements clearly identify the needs and expectations of all partners. Each Fd must be validated by an awarding institution (usually an HEI) with degree awarding powers. It is this institution that has ultimate responsibility for assuring the standards and quality of learning opportunities of the award, which may be delivered through a consortium of partner FECs. The responsibilities delegated by the awarding body to the FECs for managing the standards and quality of the Fd should be clearly laid out in Partnership Agreements and supporting documentation.

Work -Based Learning - involves higher-level learning both within the institution and in the workplace, i.e. higher level learning based in and on work. It should be a two-way process, linking theory and practice, where learning in one environment is applied in the other. Work-based learning can be achieved through many forms and activities centred both in the classroom and in the workplace. It is not the same as placement learning, although learning on a placement is one of the possible vehicles for undertaking WBL. Further examination of the concept of WBL in Fds is included later in this document.

1.3 Types of entrant to the Fd

An Fd is intended to provide access to higher education for people from a variety of backgrounds and starting points in terms of qualifications and experience. This Framework Specification has been developed to fully support this ethos.

Accordingly, individuals deciding to complete an Fd in COM may have

- experience without qualifications
- qualifications (academic or vocational) with considerable experience
- qualifications (academic or vocational) with little experience

On this basis, the Framework identifies 6 potential intake categories:

- GCSEs or A-Level entrant
- 14-19 Diploma entrant
- Mature entrant from a non- construction/built environment background
- Mature entrant from a construction/built environment non-contracting area
- Craft or technical apprenticeship Level 2 or 3 entrant
- Mature entrant – craft, technical or supervisory contracting role

Further detailed discussion on intake profiles is given in Sections 10 and 13.

2. AIMS OF THIS FRAMEWORK SPECIFICATION

2.1 General

The aim and purpose of this framework specification is to guide and enable universities and colleges to both accelerate and inform the development of Fd provision which is of optimal relevance in Construction Operations Management (COM).

COM is broadly concerned with the 'contracting' area of the sector. In this area, the range of activities, types of businesses and the mobility of people between them needs to be considered. Typical job roles are likely to be both site-based and office-based. Consequently, an Fd should meet the needs of those aspiring to work in construction site supervision and management (which includes a number of specialist areas e.g. civil engineering, housing, etc.) and also those in construction contracting operations roles such as estimating, planning, buying, surveying and site technical support. Some individuals may have current and/or future responsibilities for a range of these functions. For this reason the scope of coverage of the Fd should provide support for achievement of NVQ Diplomas at the appropriate level in both Construction Site Supervision/Management and Construction Contracting Operations.

Use of the framework specification should help providers to work with industry representatives, including employers, to design, approve and deliver Foundation degrees in line with the requirements of the Framework for Higher Education Intermediate Level (Level 5) [1] and the associated QAA Fd Qualification Benchmark [2]. Also, at the same time, align appropriately with National Occupational Standards (NOS), NVQ Diploma, CSCS and professional institution requirements.

In this context, the framework specification has been designed to mesh with:

- Accreditation requirements of the Chartered Institute of Building (CIOB)
- **fdf** guidance
- Quality Assurance Agency (QAA) requirements
- HE validation and quality assurance procedures
- NVQ Diploma and CSCS requirements

Use of the framework specification will therefore give providers a number of advantages, for example:

- Potential for sector-wide recognition that will reassure employers that the Foundation degree has been benchmarked against the industry

- requirements
- Confidence that their Foundation degree development will be in line with employers' needs
- Documentation that will help accelerate and shape development stages in designing a degree

The framework has been developed by a partnership involving representatives of all key stakeholder groups including ConstructionSkills, the Chartered Institute of Building (CIOB), *fdf* and representatives from a range of higher education institutions and further education colleges, the Higher Education Academy and Lifelong Learning Networks.

It has been shaped through on-going guidance from a Strategic Advisory Group drawn from the above stakeholders, the support of a specialist consultant, background research [7] into current 'employer driven' provision and national occupational standards (NOS). A wide range of employer views have been accessed as part of the background research – more details of which are given in the following sections.

This document was prepared in Summer 2010 and reflects the national and industry contexts at that time. It will be updated online by ConstructionSkills and new versions produced as needed, to include latest information in relevant sections. Users of this Framework Specification are encouraged to provide feedback, case study examples etc. through the ConstructionSkills link given on the cover page. Such feedback will be very helpful in informing future versions of the document.

2.2 Structure of the framework specification document

This framework specification gives guidance to providers, including some case studies and examples, in the following areas:

- the aims and background research underpinning the document
- employer engagement
- the value of Foundation degrees
- the ConstructionSkills (SSC) remit and industry context
- the education, training and skills context
- the HEI validation process for Fds
- professional body accreditation and recognition
- obtaining the CSCS card
- the learner and target learner profiles
- key learning outcomes and curriculum content
- delivery
- assessment
- work-based learning

- progression
- marketing of Fds in COM

Many of these topics are inter-related but all are important in terms of giving integrated guidance to providers in a single document. However, the following are high priority items which are given particularly detailed attention:

- apprentice progression onto a Foundation degree
- progression to honours level study following a Foundation degree
- accreditation/recognition by CIOB and other professional bodies, as appropriate
- details of how a Foundation degree can support obtaining a CSCS card
- guidelines on the nature of higher level work based learning in COM

2.3 Some matters arising during development of the Framework Specification

Although Fds are approaching a stage of relative 'maturity' across many employment sectors, it is fair to say that views on various detailed aspects and their application are developing more slowly in construction.

Accordingly, the development partnership and strategic advisory group for this Framework encountered a number of matters on which incoming opinions in the group (and therefore presumably the sector) differed. Full resolution of these was not possible in the timescales involved.

Under these circumstances, the strategic advisory group has taken a specific position on each of the various matters in an attempt to capture a majority view. Full details are given in later sections, but the positions are summarized here for convenience, together with the differing views. It is possible that, with experience, some of these may be updated in later versions of the document.

- WBL is learning that uses work as its basis, but does not necessarily take place (physically) in the workplace. Both 'simulated' and 'situated' strategies or a mixture of both can be employed. This contrasts with some views, which assume WBL is always carried out in the workplace or on site and that WBL outcomes should always be demonstrated in the workplace.
- A wide variety of potential entrants to the Fd in COM is envisaged, ranging from those in work but with no qualifications, to those with qualifications but no experience in COM. A contrasting view, voiced strongly by employers in the initial research phase, is that entry should only be for those in relevant (current) work with enough experience in the industry.
- There are different views on the balance between academic (higher

education) and vocational outcomes which an Fd in COM should deliver. Guidance is given here in both areas, but that on the vocational side is more detailed. Providers, therefore, must ensure appropriate academic outcomes are also set when designing and approving an Fd, so the award is located firmly at Level 5 of the FHEQ and acts as an adequate preparation for honours degree study. There is a contrasting view that an Fd is primarily a vocational award which can be considered directly alongside other vocational awards e.g. an NVQ Diploma – and that higher educational outcomes are less relevant. But this is not in accordance with the Fd Qualification Benchmark [2].

- For defining entry and progression, the numerical levels in the newly developed Qualifications and Curriculum Framework (QCF), and the associated vocational awards at these levels can be broadly considered alongside the higher education (FHEQ) framework levels. However, some take the view that these two frameworks are not yet ready to be compared and used in this way.
- An agreed process for sector endorsement of an Fd in COM does not yet exist. Further discussions are needed between ConstructionSkills and **fdf** to set up such a process, which may need to build on and combine the two processes currently existing in these organisations
- Professional body accreditation of the Fd may possible through various bodies. The CIOB is taken as a detailed example here since this is likely to be the most widely applicable body. The situation with other bodies is not yet fully clear.

3. EMPLOYER ENGAGEMENT

3.1 Policy

This framework has been developed considering feedback from employers. It is likely that most employers and individual learners will find that the outline Key Learning Outcomes and Curriculum Content satisfies many of their needs as the content has also been identified considering the NOS which have been developed and approved by employers. However in all regions there may be specific needs that can be added to this Framework.

It is essential that employers who are considering placing students on an Fd in COM, are fully consulted, including those based within the regions. This will help ensure provision of any necessary specialist functions within the programme and also help meet the needs of smaller enterprises wishing to develop their technical, supervisory and management expertise.

Consulting employers is an essential activity that should take place before, during and after the Foundation degree development process. Section 14 explains WBL, a key aspect of the Foundation degree award. In relation to WBL, providers need to actively develop and maintain partnerships with employers to properly implement and manage this aspect. Close collaboration between the provider, employer and learner is necessary at all times to try to maintain the right balance between the WBL parts of the award and the specific academic learning outcomes – alongside the learner's and employer's business commitments.

Employers who have traditionally provided work placements or work experience, may not be familiar with the ethos of WBL in higher education and the radically different potential benefits and opportunities it offers. It may help attract employers and learners if the provider explains in detail the process and potential benefits of WBL- in terms of the employer's business requirements and the development of higher level knowledge and skills amongst their key technical, supervisory and managerial people.

The topics outlined in this section are considered to define the 'threshold of acceptability' - below which the level of employer engagement should not fall in order to meet the standards and ethos required in an Fd. This level of acceptability requires actual engagement and translation of the values espoused in the FDQB [2] into real actions and activities.

3.2 Consultation

Hopefully employers and providers already work together through existing networks and links. But there can always be more done. The following sections suggest further ways in which the voice of employers, learners and recent graduates can be more clearly

heard and their opinions considered in designing a course that meets their requirements.

National evidence [7] shows that employers generally welcome involvement of the type described above – particularly on detailed curriculum requirements and outcomes and skills they would find most useful. In the present economic climate some businesses, particularly SMEs, will find the time commitment associated with such involvement difficult. However, busy employers of all sizes and types will always struggle to find the time to engage, but when they do, they reap the rewards.

When employers and learners have ownership of the award it is likely that they will be able to be of major assistance in its further marketing and promotion. This is discussed in more detail in Section 16.

3.3 Consulting the prospective learner

It is highly likely that many of the prospective learners for an Fd in COM are employed. Some may be in the process of completing an apprenticeship and will be looking to an employer for support for progression onto the Fd. Others may already be in a technical or supervisory role, but have been away from formal education for some time. Access to these potential students may provide the starting point for consulting their employer and building a valuable partnership.

3.4 Encouraging employer involvement

In order to widen the consultation, employers' federations or forums and local business partnerships, local professional body and trade association groups should be invited to support the programme. It may help to start the dialogue with employers by providing a brief, plain language, information sheet about the programme explaining how students completing the Fd can benefit their business. It is also helpful to outline how these key potential industry partners can be involved in the programme. Some employers may be interested in providing guest lecturer teaching or access to specialised sites or equipment.

3.5 Involving employers in course development, delivery and review

It is an obligatory requirement in Fds that employers are actively involved in the design and review of the award [2,8]. Ideally a representative group of employers should be invited to consider their local needs within the context of this framework, designing optional pathways to suit specialised needs if there is potential student demand. Involvement of employers in the standard 'annual programme review' process undertaken by providers, as well as an ongoing feedback via employer forums are key tools for getting employer input to review activities.

Employer involvement in delivery and assessment can be through provision of WBL, visiting lecturers, practitioner seminars and provision of live briefs and case studies. Further discussion of these aspects is included in later sections of this document.

3.6 Arranging suitable modes of study and student support

Two defining characteristics of Fds are flexibility and accessibility. The Fd therefore provides an ideal opportunity to be responsive to the ways in which industry operates.

Employers should be asked about how and when they may be able to support their people attending. Some employers may be able to allow people some time away from their workplace, either day or evening release. But often, full day release may not be appropriate.

The WBL elements of the award could well take learners out of the lecture room and many providers would be able to offer flexible modes of study. However it should be recognised that not all preferences can be met. Where regular attendance such as day release is difficult for learners, alternative study strategies should be developed. The on-line delivery of course materials may be an option for some learners and the necessary IT learning and support systems would be an integral part of the award in such cases.

In addition, people with experience and prior learning – see the student intake profiles in Section 10 - may well have considerable accredited prior learning and would maybe find it possible, with provider cooperation, to 'drop in' and 'drop out' of study in a planned fashion, so progression could be accumulative - and not necessarily with the same provider. However, current funding methodologies and the logistics of transfer between institutions may mean this is actually a rather difficult thing to organise.

3.7 Helping employers to provide work-based learning

Where WBL is 'situated' i.e. planned to be carried out in the workplace (see Section 14 for different approaches to WBL), employers and providers should work together with the learner to draw up learning contracts, identifying and agreeing the needs and commitments of each partner. This can include work-based projects to support the learner in developing the necessary knowledge and skills, whilst helping the employer's business. Institutions providing staff to liaise directly with employers' work-based and project mentors would be beneficial and a good practice model.

Where employers have difficulty providing suitable opportunities, the academic provider should consider support by organising visiting tutors and guest lecturers, possibly with the assistance of the regional employer/professional groups. Some line managers and professional institution members may be willing to provide support as part of their continuing professional development. Many colleges provide support linked with NVQ Diploma on-site assessment, training arrangements and assessors. Employers may need support managing the mentoring and supervision of WBL. The employer, learner

and academic tutor all need to work together on a continual partnership basis to ensure that the appropriate learning outcomes are met.

An in depth discussion of the different models and approaches to WBL, and employer involvement in these, is given in Section 14.

3.8 Balancing long-term requirements and short term needs

Providers should ask and consider both the employers' and learners' individual needs, balanced with the needs of the whole cohort, the wider sector needs and the resources available. As part of this, providers need to take students' learning styles into consideration, adapting the curriculum and delivery methods to meet students' learning needs.

Providers should take care about basing all content of the Fd on simply what employers themselves say they need now. Employers and learners should be encouraged to consider their strategic longer-term development requirements and uncertainties, not just their short-term focus. Since the Fd is an educational rather than training vehicle, there is a need to ensure that relevant knowledge, cognitive approaches and skills are included which relate to likely future needs, such as innovative methods of construction, sustainability, management of new technologies and offsite prefabrication. Thus, the Fd graduate will be in a position to engage with and contribute to required changes in future construction practices and processes, not just fulfil an existing job role or roles.

The provider should help explain these broader educational aspects and requirements of the award in addition to the need to develop transferable personal and specialist skills so the learner is able to complete the course and contribute productively in a COM environment. For example some learners may need support from the very start to develop IT based skills to get over any initial concerns about distance learning within virtual learning environments.

3.9 Case Study

Appendix 1 provides an example of an overall plan, covering the above aspects, which was used in the development of an employer and sector-led Construction Fd.

Appendix 2 contains an abbreviated version of this, focussing on the specific employer engagement elements in the plan

4. THE VALUE OF FOUNDATION DEGREES

4.1 The value of Foundation degrees to employers

The background research [7] makes it clear that employers perceive there is a need for qualifications with characteristics that Fds can offer.

But it also reveals that the current level of engagement with Fds by COM employers is low and the value of an Fd to employers, compared to other qualifications, is not clearly understood.

However, those employers already involved with Fds in the COM area highlight their value to business in a number of respects :

- The Fd makes a key contribution to a workforce development and qualifications portfolio at a point between craft and full professional levels. Companies indicate that COM requires substantial numbers of staff who are technically knowledgeable and operationally proficient 'somewhere in the middle' of these two levels. Fds have the potential to bring more rigour and meaning to qualifications at this level.
- Being able to offer the Fd is giving a positive edge to recruitment of better calibre entrants to the industry.
- The smooth transition to an extended period of study to achieve an honours degree acts as a motivator to staff who want to achieve to a higher level, for example, those intending to apply for professional membership.
- The WBL element promotes transfer and application of knowledge and skills in both directions to the benefit of the business and the Fd programme. For example, WBL projects can be focused on company issues and students on the programme tend to share their learning with their team and line manager.
- The academic underpinning of the Fd helps learners to develop confidence and knowledge which they can apply to their work tasks. They make stronger contributions to discussions and step forward to take responsibility.

Overall, it is critical that providers can articulate these business benefits to companies of having employees on the Foundation degree. The opportunity to use WBL projects to address real company needs is of major importance.

4.2 The value of Foundation degrees to providers

The case for providers offering this qualification is persuasive. Demographics and social needs (declining birth rates resulting in fewer school leavers, combined with more people working beyond traditional retirement age) mean that education and training must focus increasingly upon the skills of people already within the workforce. The types of potential entrants to this Fd are set out in Section 10. The profile of potential learners reflects a sector need to upskill those already operating in the sector as well as recruit new entrants. This is an issue emphasised within the Leitch Report [10] and is gaining increasing focus within the activities of the Higher Education Funding Council for England [11].

In summary, engaging in the delivery of Fds offers value to providers in a number of ways. It

- demonstrates to employers a responsiveness to their workforce development agenda
- increases access to students who are already in the workforce
- provides a mechanism for providers to involve employers in consultation on curriculum development and in programme delivery and review
- provides evidence to funders that a provider is pursuing its responsibilities to address 'World Skills', the government's response to the Leitch Report [10]

5. THE CONSTRUCTIONSKILLS REMIT AND THE INDUSTRY CONTEXT

5.1 ConstructionSkills Remit

The occupational areas covered by COM falls under the remit of ConstructionSkills – the Sector Skills Council for the construction industry.

ConstructionSkills is licensed by the UK Commission for Employment and Skills as a Sector Skills Council (SSC) and has, as key goals:

- raising employer engagement, demand and investment in skills
- ensuring authoritative labour market information for the sector and
- developing NOS and ensuring qualifications meet employer needs.

ConstructionSkills recognise that Fds can help address a range of the key skills issues and priorities identified in the Sector Skills Agreement (SSA) - see section 6.1 - and could potentially assist in promoting lifelong learning in innovation and sustainability. Foundation degrees are recognised by ConstructionSkills as one type of qualification within the sector's Construction Qualification Strategy (CQS) [14]

ConstructionSkills is also working with the five other Sector Skills Councils (AssetSkills, ECITB, EUSkills, ProSkills and SummitSkills) that operate across the Built Environment as the Built Environment Skills Alliance (BESA) [15] The Alliance is establishing a Higher Education Strategy for the Built Environment. Further details of this and its relationship to Fds are given in the next section.

ConstructionSkills has also been a pathfinder in advocating NOS as a fundamental developmental, diagnostic and qualifying tool linking all aspects of the sector – potentially for strategic, organisational and individual purposes. NOS provide a central mechanism for inter-relating academic, vocational and professional qualifying systems across the built environment, based on NOS as the 'common currency' of industry. Further details of the role of NOS in relation to Fd design is given in Section 6.

The employer-led ConstructionSkills' Standards and Qualifications Validation Group (SQVG) currently approves and validates vocational qualifications (on behalf of the sector) in meeting sector criteria in accordance with the Construction Qualification Strategy (CQS). Further information is available from lifelonglearning@cic.org.uk. Details of potential future developments in relation to providing similar sector endorsement of Fds in COM are still under discussion between ConstructionSkills and **fdf** and will be included in later versions of this document. Obtaining such independent sector recognition and endorsement for programmes will be important for employers, professional bodies and others

Construction Skills will also maintain and update future versions this COM Framework Specification, as required. This will include information about the sector's requirements for Higher Apprenticeships meeting the Specification of Apprenticeship Standards for England (SASE).

5.2 Current industry context

Construction is currently the largest single industry in the UK and is a significant exporter. The following statistics broadly indicate the size and impact of the construction sector over recent years. The construction sector:

- contributes more than 8 % of the UK's GDP and,
- employs nearly 2.7 million people,
- has an output of over £110 billion,
- consists of around 200,000 construction firms in the UK (92 of which employ fewer than 10 people); 71,200 professional practices; and significant skills gaps in some professions. Pre recession, the industry then needed over 80,000 new recruits every year. However with the recession the number of new recruits needed every year, for the next five year period, has dropped to around 48,000.

This document was prepared in Summer 2010 and reflects the national industry context at that time. Clearly, now, the primary factors driving change are the downturn of the UK economy and uncertainty about the recovery. The current severe drop in construction output, the restrictions on credit and lending and the reduction in public spending will continue to impact upon workload and, consequently, workforce needs for a prolonged period. Some of the key factors are summarised as follows:

Influences affecting demand:

- Public spending will come under pressure as government looks to reduce the current levels of public sector net borrowing.
- The UK economy is expected to emerge from the technical recession in 2010 followed by a gradual recovery to long term levels of GDP growth of around 2.1% p.a. through to 2020.
- UK construction output will start to recover from around 2011, although it will be at a lower level than GDP growth. Construction output is forecast to be at around 1.8% p.a. through to 2020.
- There are a number of other factors such as unacceptably large numbers of unemployed, particularly school leavers and graduates that may force a change in government spending plans, but these are difficult to judge at present.
- Previous recessions indicate that it will take around ten years before output returns to pre-recession levels.

Influences affecting supply:

- At the beginning of 2008 there were over 300,000 people working in the professional services sector. Current losses could be at least 20%, say 50,000 professionals and are likely to rise.
- Redundant professionals are unlikely to return in significant numbers to the industry before 2012 -2013. Even allowing for those who do not return this means that there will still be, say, at least 40,000 experienced professionals available to fill vacancies as they arise during a period of growth.
- Meanwhile, the HE pipeline will continue to produce around 10-12,000 full-time Built Environment post-graduates (or their equivalent) per annum. 2009 has seen an almost 10% rise in degree applications and this is likely to continue. The supply of P/T post-graduates is currently averaging around 5000 p.a., but this could change, as many would be dependant on having employment.
- Many graduates from Built Environment disciplines coming onto the market during the next 2-3 years may never get a job in the construction industry and could be lost for ever.
- Prospective younger students and their parents are frequently are unaware of the technical and professional pathways available and desirable in the construction sector and have low aspirations to enter the construction industry.

For an up-to-date picture of construction industry trends and sector research, visit;
<http://www.cskills.org/supportbusiness/businessinformation/csn/index.aspx>

The above statistics and projections will be updated in subsequent versions of this Framework Specification.

6. THE EDUCATION, TRAINING AND SKILLS CONTEXT

6.1 Education versus training

Since a COM Fd is a higher education qualification, but with a strong emphasis on linking theory to practice through WBL, it provides a basis for development of both higher level academic learning and a range of professional skills and competences. It therefore bridges the traditional divide (which exists in many employment sectors) between 'education' and 'skills training' and offers a key vehicle for combining these aspects in an appropriate manner in the COM sector.

Since an Fd in COM is a higher education award with a dual purpose, it cannot be designed to deliver and provide evidence of all the professional workplace skills, competences and attitudes necessary for a particular job role or roles at a particular level - as a vocational award (such as an NVQ Diploma) is intended to do. To be categorised as a higher education award, it must also expose learners to relevant fundamental academic and theoretical knowledge and begin the development of higher level cognitive, analytical and synthesis skills to underpin a fully critical, evaluative and 'change oriented' ethos to professional activities. Providers should address these higher education needs, alongside those of the NOS outlined earlier in Section 5.1, through the curricula and assessment strategies in each of the module/topic areas. It is emphasised that these academic aspects would only become fully developed at subsequent Honours or Masters level. But the Foundation degree is an opportunity to help students to embark on this journey and begin to prepare them for subsequent academic study at higher levels.

Changing industry work patterns include new models for procuring work and integrated occupational project teams. Known future needs in COM include management of innovative methods of construction, sustainability management, management of new technologies and offsite prefabrication. Furthermore, the built environment has to be seen in future as an integrated 'whole-life' process including development, construction, ongoing servicing and operation and decommissioning/demolition.

In this changing environment, employers and individuals will need to function across traditional boundaries with flexible and mobile qualifications/certification, work roles and career pathways. Standards, qualifications, education and training provision will need to use opportunities for cross-discipline/occupation approaches. This is needed for training, developing and qualifying new entrants to the sector, as well as up-skilling and re-skilling to meet the changing needs of the sector and economy.

Against this background, employers and learners should be encouraged to consider their strategic longer term educational needs, not just their short term vocational job related focus. As with all sectors, the future in construction is uncertain and subject to continuous change. Therefore, the higher educational element of the Fd should involve

a significant element of 'future proofing' for the learner – which can be built upon through later progression and study. Thus, the cognitive abilities and fundamental knowledge to engage with future management issues in COM - such as helping define new job roles and processes that do not yet exist, initiating and managing change, stimulating innovation, and incorporation of technologies which have not yet been invented into COM processes are crucial educational requirements which go beyond pure vocational learning. The work based learning nature of the course, module content and assessment strategies can all be designed to incorporate appropriate exposure to such concepts and develop appropriate outcomes. On this basis, the Fd graduate will be in a position, as they develop, to progressively engage with and help trigger the required changes in future construction practices and processes.

These higher educational aspects are addressed more fully in Section 11. The remainder of this section focuses primarily on the complementary training and skills context.

6.2 Sector Skills Agreement

ConstructionSkills has established a Sector Skills Agreement (SSA) for the industry in conjunction with its employers and representatives from stakeholder organisations [16].

This has the following priorities:

Attracting and Retaining Talent:

- Promoting careers in construction
- Encouraging recruitment from a more diverse pool of talent*
- Assisting retention by providing employers and employees with appropriate support*
- Supporting vocational/sector-specific qualifications in schools, colleges and universities*

Developing Talent:

- Promoting lifelong learning as an aid to achieving qualifications, career progression and continuous professional development*
- Improving health and safety knowledge and behaviours*
- Supporting evolving professional and specialist skills needs associated with sustainability, low carbon and innovative construction*

Improving Business Performance:

- Increasing employer investment in training and development to improve productivity *
- Increasing the uptake of skills brokerage, business support services and skills funding packages
- Improving supervisory, management and leadership skills*
- Promoting integration and collaborative working in the industry*

- Encouraging clients to invest in the construction skills base through best practice procurement

Strengthening the Skills Infrastructure across the Home Nations

- Developing project based training across the nations in support of major construction projects
- Implementing the Construction Qualifications Strategy to ensure qualifications meet the needs of employers and learners*
- Providing authoritative national and regional labour market intelligence
- Responding to the specific needs of the construction industry in the nations and regions *
- Influencing skills and training policies and funding to ensure that they are fit for purpose for the construction industry
- Collaborating with employers and their representative bodies, professional institutions, trade unions, delivery partners and other Sector Skills Councils to develop an integrated approach*

*Those items marked * above are key themes which are integrated within this Framework Specification for Fds in COM*

As with all sectors, the economic climate will impact upon the demand and mix of workforce skills required. The current SSA themes and priorities remain broadly relevant, but their related scale, timing and palette of skills require changes of approach and detail. The need to re-skill and re-deploy qualified professionals creates an opportunity to broaden the existing skills base towards new and emergent sectors such as sustainable construction and communities. Similarly, a greater emphasis is required in the provision and take-up of crossover routes to gaining complementary skills.

6.3 The Construction Qualification Strategy (CQS)

The Construction Qualification Strategy (CQS) has been developed by Construction Skills, in partnership with other sector stakeholders, and is intended to cover all levels of educational and vocational qualifications within the sector [17]. Although not yet widely understood or utilised in the higher education sector, it effectively constitutes a 'moving annex' to the above Sector Skills Agreement and aims to:

- ensure a well-planned and structured approach for developing fit-for-purpose qualifications and pathways that meet sector and learner needs
- provide a mechanism for implementing and realising the sector's vision, stated in the SSA, through the support and engagement of key stakeholder partners
- offer a blueprint and focal point that draws together a coherent set of guidelines, principles, priorities and actions as a basis for future planning and development
- provide a steer for:
 - bodies developing and awarding qualifications/units
 - the sector home nations' regulatory and funding bodies approving and funding qualifications/units
 - mapping pathways and inter-assessed qualifications

In support of these aims, the CQS has the following specific objectives:

- identify the sector's key requirements for qualifications, units, pathways, qualification development and other lifelong learning provision
- determine how well existing qualifications, units and other learning provision meets identified sector needs
- identify changes required and produce a development and implementation plan
- develop effective ways of working with the bodies that are developing and awarding qualifications/units, professional qualifying bodies, certification schemes, home nations' regulatory authorities and their qualification frameworks
- establish a process for awarding organisations that are identifying the feasibility, planning, developing, evaluating, reviewing and validating existing and required qualifications/units to meet the sector's needs
- ensure sector qualification proposals are communicated to, and supported by, key stakeholder partners
- suit employers and individuals training and working in all four home nations
- inform home nations' funding plans
- advise training and assessment provision models
- identify mechanisms for establishing mutual recognition of qualifications

Further details and information on ongoing developments on the CQS can be obtained from ConstructionSkills.

6.4 The Higher Education Sector Skills Strategy and Foundation Degrees

ConstructionSkills is working with the five other Sector Skills Councils and Standards Setting Bodies that operate across the Built Environment, under the heading of the Built Environment Skills Alliance (BESA) [15]. The Alliance, which consists of ConstructionSkills, AssetSkills, ECITB, EUSkills, ProSkills and SummitSkills, is establishing a Built Environment Higher Education Strategy.

The vision is to develop an approach for BESA organisations and the higher education community to work in partnership in an agreed way. Work will focus on the areas of needs and recruitment; curriculum and provision and provision delivery, which have meaning across the BESA organisations.

This vision will be achieved by increasing engagement and operating across the BESA organisations, using existing developments and relationships, but also finding new opportunities to maximise mutual advantage/gain between the BESA organisations and the higher education community. The approach is facilitative rather than directive, given the preferences of the BESA organisations, their existing work and necessary differences in content, including in the treatment of occupationally specific provision.

Those interested in inputting to the Strategy via a Virtual Sounding Board Forum can register their interest by emailing besa@cic.org.uk.

Discussion of some mandatory characteristics of higher education awards and how these may be incorporated in a COM Fd are included in Sections 11 and 14

ConstructionSkills has been involved with *fdf* in analysing the position of Fds in the construction sector [18]. This work has identified that, although ConstructionSkills has previously developed Foundation Degree guidance, it has been interpreted in different ways, resulting in a variable pattern of Fd programmes and a lack of overall awareness and recognition of the value of the award. It is anticipated that this Framework Specification will address this issue and provide a structured basis for future development of Fds in the COM sector.

6.5 Matching sector skills needs and educational provision

The sector has recognised through the CQS that it needs a more cohesive approach to ensure that education, training and qualification provision is reviewed and shaped to more readily address the skills issues identified within the sector.

ConstructionSkills has carried out extensive development of NOS and research to identify labour market information including skills needs, gaps and shortages [19]. It has also identified that the wide range of existing further and higher education, training and provision available in the sector has evolved over time in ways that do not necessarily reflect the actual, current and anticipated future, needs of the sector.

There are also the requirements independently set down for education and training by professional bodies and the Quality Assurance Agency for Higher Education (QAA) - a significant number of which have now been mapped to NOS.

ConstructionSkills encourages all education and training providers to align provision with sector skills needs in ways that account for both common areas of learning, as well as specialisms. It is essential to collectively tackle skills issues related to the massive challenges facing the sector and its customers.

6.5 The significance of National Occupational Standards (NOS)

The sector has, over many years, carried out extensive work to develop and maintain NOS - representing employment competence needs relating to the wide variety of technical, managerial and professional areas of the sector.

The NOS [20, 21] represent a benchmark of industry-specified best practice of performance and underpinning knowledge and understanding and provide a powerful multi-purpose tool for the sector. NOS have been developed for industry people by

industry people. They are designed to help improve industry performance by enhancing the people's performance in the workplace and informing training and vocational education about contemporary industry needs. Extensive ongoing work is carried out to review the NOS for the Built Environment to ensure they reflect changing industry needs.

Construction Skills has been a pathfinder in advocating NOS as a fundamental developmental, diagnostic and qualifying tool – potentially for strategic, organisational and individual purposes. NOS provide a central mechanism for inter-relating academic, vocational and professional qualifying systems across the built environment, and represent the 'common currency' of industry. NOS can help organisations and individuals identify progression paths and focus education, training and qualification development on industry competence needs

Since NOS are one of the external reference points for development of a Fd, this approach has been used to help develop the curriculum guidance in Section 11. Details are given in Appendix 3. General guidance on the use of NOS in the development of course curricula can be found at [24]

7. THE FOUNDATION DEGREE VALIDATION AND APPROVAL PROCESS

7.1 Introduction

Fds need to be approved for a variety of purposes and stakeholders, including students, the higher education community, professional bodies and sector representative bodies.

Programme validation (programme approval) is the process of scrutiny and approval that higher education institutions (HEIs) use to ensure that programmes are of the correct standard and that the quality of learning opportunities offered to students are appropriate to allow them to achieve this standard. Unlike many other levels of education, the responsibility for standards and quality of higher education awards, such as Fds, rests with individual HEIs (the Awarding Bodies), each of which is independent and self-governing.

Because institutions are self-governing, no two validation processes are identical. There are however, similarities between validation processes and most are based upon best practice recommendations contained in the QAA Code of Practice - Section 7: *Programme design, approval, monitoring and review*. [25] It is noted that the QAA Code of Practice uses the terminology 'programme approval'. Many universities and awarding bodies offering Fds use the word 'validation' instead of programme approval. We adopt the term 'validation' here for clarity and ease of understanding and understand it to relate to the overall approval process of the awarding body which must be completed before the course begins.

It is important to note that, whatever validation process is used (see below), the QAA Code of Practice – Section 7 contains the following under Precept 6. Underlined aspects are of critical importance in relation to the present discussion on Foundation degrees

QAA Code of Practice – Section 7 (Extracts from Precept 6 and associated commentary)

“...the final decision to approve a programme is taken by the academic authority , or body acting upon its behalf, that is independent of the academic department , or other unit that offers the programme , and has access to any necessary specialist advice”

“...it is important that there is a clear designation of the body responsible for approving the programme and for ensuring that all conditions have been met before the programme begins”

7.2 Programme approval by the validating HEI

Most validation and approval processes focus upon the development of clear and transparent programme learning outcomes that are supported by the curriculum and linked to the assessment and assessment strategy. This is done through the generation of a programme specification [26] which will generally cover the following:

- awarding body/institution
- teaching institution (if different)
- details of accreditation by a professional/statutory body
- name of the final award
- programme title
- UCAS code (if applicable)
- criteria for admission to the programme
- aims of the programme
- relevant subject benchmark statements and other external and internal reference points used to inform programme outcomes
- intended programme learning outcomes: knowledge and understanding, intellectual skills, professional skills, transferable skills and other relevant attributes
- teaching, learning and assessment strategies to enable outcomes to be achieved and demonstrated
- programme structures and requirements, levels, modules, credits and awards
- mode of study
- language of study
- date at which the programme specification was written or revised.

A programme specification will be produced on paperwork generated by the validating higher education institution. Often as part of the validation process institutions will include information on:

- what makes the programme distinctive
- assessment regulations
- student support
- methods for evaluating and improving the quality and standards of learning, including
- consideration of stakeholder feedback from, for example, current students, graduates and employers.

The programme specification will be supplemented by documentation which provides information of finances and business case, module details and other resources

requirements (estate, ICT, library etc.). In relation to an Fd, detailed information on the requirements and approach to WBL may also be included.

7.3 What to expect

As described above no two validation processes, nor programmes designed within this framework, will be the same. However, most will be based around one of two different systems. The first is committee-based, whereby paperwork is completed and passed through a series of committees with representation by the delivering School. Often these committee meetings will be based in the School, Faculty and Institution. It is worth pointing out that in most institutions responsibility for quality assurance and programme approval sits outside the Schools who are responsible for delivery. The second method process is based around validation event. Material is developed and all those involved come together for a single event to consider the programme.

The key variable which can be different from institution to institution is the length of time taken to move through the process. This can be as little as three weeks up to a year and over. Any FE college who are considering entering a franchise or partnership with a University or HEI will want to establish the timeline and target date for obtaining validation before committing to the programme development. Also, there is the possibility of FE providers acting as a consortium of delivery partners with the validating HEI. In this case it is important to establish comprehensive progression agreements together to ensure cohesion and close working relationships between all partners.

Appendix 4 shows a typical validation process with the requirements at each stage.

7.4 Evidence for professional & industry recognition

The QAA Code of Practice – Section 7 on Programme Approval (Precept 5) [25] lists a number of principles and external reference points which it is recommended to incorporate in programme design and which should be tested at the validation and approval stage before the programme can commence.

QAA Code of Practice – Section 7 (Extracts from Precept 5 and associated commentary)

There are many principles and reference points that may be considered when designing and developing a new programme. These include...

External reference points, including relevant subject benchmarks, any European reference points, national qualifications frameworks for higher education and, where appropriate, the requirements of Professional Bodies and employers

In a similar vein, the Foundation Degree Qualification Benchmark [2] adopts the same ethos concerning the design, validation and approval process surrounding Fds – but is more specific

QAA Foundation Degree Qualification Benchmark - October 2004 – The Design of Foundation Degree Programmes

Extract from paragraph 21

“...External reference points such as the FHEQ, the NQF, subject benchmark statements, national occupational Standards, SSC Frameworks and the HEFCE Prospectus are important reference points, and should be considered during the design and validation of Foundation Degrees”

Clearly, then, the need for relevant specialist advice – from both academic and industry/employer perspectives - is crucial to ensure all relevant conditions are met before a programme can commence.

Furthermore the QAA Code of Practice Section 7 [25] makes the additional point that major efficiency benefits are present if all academic and industry requirements are addressed in an integrated, holistic manner during programme validation and approval

QAA Code of Practice – Section 7 (Extract from commentary on Precept 5)

“Where practices for the initial design and approval of programmes are rigorous and effective, subsequent evaluation is likely to be relatively straight forward. Duplication of effort and documentation can be reduced if the requirements of external bodies ... are taken into account when programmes are designed, approved and reviewed.”

Ideally then, an overall validation and approval process for an Fd in Construction Operations Management would produce all the required evidence, in the required form, for evaluation and endorsement by professional and sector bodies, such as CIOB and ConstructionSkills, to confirm alignment with professional and industry requirements and gain sector support.

Awarding bodies and providers are therefore encouraged to contact the professional institution and ConstructionSkills at an early stage to advise of proposals and discuss how this may be accomplished.

In the light of the above discussion, HEIs may wish to consider whether their current validation and approval processes need enhancements to align with the above precepts and, at the same time, avoid duplication of effort. This may mean that typical processes, such as outlined in Appendix 4, need adjusting. Also, the quality assurance systems of the HEI and any FEC delivery partners may need combining and/or aligning during delivery of a Fd – which will require a flexible and open minded approach to harmonising and managing the process.

In summary, an Fd is a higher education award but with selected key industry, vocational and employer requirements included. It therefore requires an appropriate balance in its design and approval to meet both academic and professional/industry/sector requirements.

8. PROFESSIONAL BODY ACCREDITATION AND RECOGNITION

8.1 Introduction

Central to the development of an Fd in Construction Operations Management is individual learners having the opportunity to make informed choices about their career development plan and possible membership of a relevant professional body. Indeed, the primary aim of many employers and students when embarking on an Fd may be Professional Institutional recognition.

Stakeholder comments on the background research report [7] together with employer and *fdf* input has identified that professional body accreditation/recognition should be one of the five key high priority areas to be covered in this Framework Specification.

There are a number of professional bodies which could be considered for accreditation or recognition of an Fd in COM. In this first version of the Framework Specification, a general discussion of the principles and practices of professional body accreditation is given first. Then, a detailed exemplar in relation to accreditation by the Chartered Institute of Building (CIOB) [27] is given. Initial emphasis is placed on this body as it was identified as a strong candidate by most commentators on the background research report [7].

8.2 Benefit of professional body accreditation

Accreditation of the Fd by a professional body is likely to assist the graduate with regard to membership grade and future career opportunities.

This accreditation, which operates in addition to the internal validation and approval process of the awarding HEI (See Section 7), should give employers and learners additional confidence that the learning outcomes meet the professional body's academic standards, discipline coverage and teaching requirements.

Employers are likely to consider professional institution membership when selecting and recruiting people.

When deciding whether to award accredited status to a particular Fd programme, a professional body's accreditation process will consider and quantify the two major risks inherent in qualifications: the academic content and level and also the quality of learning opportunities provided.

Accreditation of undergraduate degree programmes by professional bodies is often sought by awarding HEIs, as it serves as an independent verification that the course produces graduates with the skills and attributes required by industry.

8.3 Accreditation within the sector

The Construction Industry Council (CIC), as a partner in ConstructionSkills, has recently undertaken work across the sector on accreditation. This involved working with regulating bodies, professional bodies and qualification providers who operate within the sector, to identify and agree common/core principles and processes for qualification approval, certification and accreditation. The purpose was to achieve a measure of consensus in order to move towards common accreditation protocols/practices, and timescales.

As a result of this, CIC has published [28], a common definition of the purpose of accreditation, details of common principles of the key stages of the process and a diagrammatic illustration of the accreditation processes and their relationship with the overall pattern of professional development. This includes the roles of the various stakeholder organisations – for explanation and guidance. Appendices 5, 6 and 7 give further details

8.4 What is Accreditation?

The above work has resulted in the following definition of accreditation:

“Accreditation is a type of quality assurance process under which a facility's or institution's services and operations are examined by a third party accrediting agency to determine if applicable standards are met. Should the facility meet the accrediting agency's standards, the facility receives accredited status from the accrediting agency.”

Universities approve the award of their own degrees through processes of internal validation – see Section 7. Through the process of accreditation, higher education bodies seek to verify that graduates of courses have acquired sufficient knowledge and understanding to enter practice.

For professional bodies, accreditation is the recognition that an award meets the quality standards set by that profession. Professional bodies are responsible either by legislation or by charter, for verifying the competence of the practicing professional for the purposes of awarding Chartered or Full Membership status. Therefore, through the process of accreditation, professional bodies seek to influence and maintain the standards of professional qualifications.

8.5 What does Accreditation cover?

In its most general form, accreditation of any particular academic program is based on the following criteria:

- The teaching and learning environment
- The structure and content of the program
- The quality assurance framework

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What is assessed?

- Facilities and staff
- Courses, assessments, and results
- QA processes

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What is the basis for assessment?

- By reference to internal criteria
- By reference to external criteria (such as NOS, QAA benchmarks and professional institution requirements)

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How is the assessment performed?

- Submission of documentation
- Visit to the school
- Review by committee
- Assessment of expert individual
- Decision by consensus (includes other groups)

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Structural elements supporting accreditation

- Consultative process with members
- Composition of reviewing panels
- Competences of the panel and assessors
- Information sources – reference documents and databases

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Effective Quality Practices

The following list captures various practices contributing to effective quality practices in the process of academic accreditation.

- Professionalism of the audit
- Public nature of the audit
- Participation of different stakeholders in the definition of quality criteria for programs and institutions
- Emphasis on evidence based decision making
- Training provided to those involved in self assessment and external review
- Emphasis on progress reports
- Comprehensiveness of the process and its scope

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A model and checklists of the core procedural elements is presented in Appendices 5,6 and 7. These provide a good overview of best practice principles and processes for accreditation of academic programmes by professional bodies.

8.6 Position of Foundation Degree in a professional body

The QAA has benchmarked the Fd at 240 credits and at level 4 and 5. Further academic study on an honours degree programme is possible. The exact progression depends on the university provider, but the graduate is strongly advised to ensure that both the Fd and the honours degree has current professional body accreditation. At validation of an Fd, the associated honours course to which Fd graduates can progress must be stated. Progression to other programmes is possible, but maybe less straightforward.

People who have achieved a Foundation Degree may have a number of routes to professional institution membership. People employed in the industry may complete a NVQ Diploma level 6 in the QCF. This work-based competence qualification is acceptable for a specified grade of membership for some professional bodies. As the person gains appropriate work experience they may consider completing an NVQ Diploma at a higher level as this may be acceptable for a higher grade of professional membership. For example, the CIOB has accepted NVQ Diploma holders as an entry qualification for people applying for Member grade.

In terms of accreditation of awards for membership of the engineering profession, the Engineering Council (EC) has a coordinating role in relation to the UKSPEC for professional engineers. Licensed members of the EC may accredit Fds as partially meeting requirements for Incorporated Engineer (I Eng) registration, which is the target for an Fd graduate. Since the present Fd in COM is a 'management' rather than a technical engineering award, providers may need to explore directly with the relevant licensed EC member, whether accreditation to UKSPEC is appropriate. Further details in this area, together with potential accreditation by other relevant bodies e.g. RIBA/ARB and RICS will be explored in later versions of this document.

The most recent (February 2010) statement on accreditation of Fds by the EC is given below (see EC website)

Engineering Council Statement on Foundation Degrees (February 2010)

Foundation degrees may be accredited by Engineering Council Licensed Members as partially meeting the requirements for IEng registration.

Those institutions licensed to undertake accreditation of programmes will consider requests to accredit Fds. In doing so, and before agreeing to undertake accreditation, the provider would be expected to provide information additional to that normally expected for bachelors or masters level accreditation. This would include information about:

- The degree awarding body and its relationship with any other Fd programme provider(s)
- Progression opportunities
- Careers information and guidance given to the Fd students
- How the quality of any provision in the workplace is assured by the degree awarding body
- Systems for the accreditation of prior learning/experiential learning

A visit to the education provider will normally be undertaken, including to franchisees. However, mechanisms to reduce the resource required for a visit will be explored.

Individual Licensed members will be free to decide whether to approve Foundation degrees as exemplifying qualifications towards EngTech registration.

A Licensed Member may wish to accredit a Fd leading to a bachelors degree even if that bachelors degree is not accredited.

8.7 Exemplar : Chartered Institute of Building (CIOB)

Within the context of an Fd in COM, CIOB have a central interest as a potential accrediting body.

The CIOB grades of membership, which are aligned with work functions and learning programmes, are;

- Fellow
- Member
- Incorporate
- Associate

Full chartered membership of CIOB is at honours degree level and requires specific work competences. A Chartered Member may use the designatory letters MCIOB and the term Chartered Builder. Each applicant for Chartered membership is required to sit the professional review based on the six routes to membership. On achievement of the accredited cognate honours degree, the graduate has to successfully complete the Professional Development Programme

This Fd Framework Specification in COM has been developed in conjunction with the CIOB and is an acceptable qualification for their Incorporated Grade of membership. This allows the CIOB member to use the designatory letters ICIOB. There are conditions to the acceptance of the foundation degree, namely content and module levels. A maximum 120 credits for level 4 modules and a minimum of 120 credits at level 5 is required. This constraint is to maintain the incorporated membership grade against equivalent entry qualifications.

The CIOB accreditation process involves a document submission and an inspection of the teaching institution. Based on the decision of the Interview panel (CIOB term) there are two decisions, namely approved or approved with conditions. Approval will allow the teaching provider to advertise the degree as an accredited programme with the specific professional body. Professional bodies have different accreditation periods, but the Chartered Institute of Building propose a five year accreditation period. This will also align with other regulatory body requirements and utilise existing data collection. The Chartered Institute of Building will require the teaching institution to submit prescribed annual reports.

In view of the importance of the professional body accreditation to the Construction Industry, the Chartered Institute of Building also have to approve the qualifications of the lecturing staff. Vocational, education qualifications and occupational currency are audited. Continued professional development is monitored and the programme course leader in the case of the CIOB must be a chartered member of the institute. The high stakes which accredited status brings to the teaching institution can be withdrawn from under performing institutions.

Further details of the CIOB Accreditation Process are given in Appendices 8 and 9.

9. OBTAINING THE CSCS CARD

9.1 Background

As part of its commitment to occupational competence and the drive to improve health and safety performance, ConstructionSkills works with the industry certification schemes, including the CSCS (Construction Skills Certification Scheme).

CSCS is a register of individuals carded as competent or undergoing training at all levels, and is aimed at assisting in the competence and image of the construction workforce and overall health, safety and quality assurance of construction practices. The CSCS website [29] explains the background and details.

The CSCS occupational card scheme covers all those in professional, managerial and technical occupations who operate on (or intend to operate on) or visit construction sites. It is administered on behalf of CSCS by ConstructionSkills. The overall initiative has been strongly supported by sector representatives, including the employers' federations, the Construction Industry Council of professional institutions and trade unions.

Consequently it is important that an Fd in COM should also support students in progressing towards obtaining the relevant CSCS Managers' Card.

The requirement for a COM Fd to support CSCS card attainment emerged strongly in the background research prior to developing this framework [7]. If an Fd in Construction Operations Management does not assist learners in taking their place in a 'fully carded' workforce, its benefits and attractiveness to employers and employees will be much reduced.

Mapping evidence for NVQ Diploma/CSCS card attainment should ideally be considered in the early stages of programme development as part of the initial validation/approval process in HEIs (see Section 7)

The QAA's Academic Infrastructure – In particular the Code of Practice Section 7 (Programme Approval, Monitoring and Review) and the Fd Qualification Benchmark makes clear the requirement to consider sector as well as academic standards at the programme approval stage.

9.2 Routes to Obtaining a CSCS Card

The main routes to obtaining a CSCS card, are given below and on the CSCS website [29], which should be referred to for the current situation. Routes for trainees, competent technical, supervisory, managerial and professional people are included. These are revised, updated proposals compared with the previously existing ones and will be introduced in 2010.

CARD TYPE	COLOUR	COMMENTS
Trainee Card (Technical, Supervisory and Management)	Red	<p>Available for people currently registered with further/higher education college for a nationally recognised construction related qualification.</p> <p>Trainees have the choice between the standard CSCS health and safety course or the health and safety test.</p> <p>The card is valid for three years. However it can be renewed for a further three years on application.</p>
Graduate Card (Technical, Supervisory and Management)	Red	<p>Available for people who have completed a nationally recognised construction related qualification with a further/higher education college. Graduates will be required to complete the Higher Managerial (known as MAP) Health and Safety Test.</p> <p>The Graduate Card is valid for three years and can be renewed for three years on application.</p>
Supervisor card	Gold	<p>Available for those who subsequently complete the full industry competence requirements.</p> <p>For those involved in supervisor level occupations who achieve an NVQ Diploma Level 3 in the new QCF in a relevant occupation.</p> <p>To gain this card, applicants also need to pass the supervisor health and safety test.</p>
Manager Card	Black	For those who subsequently complete the

		<p>full industry competence requirements,</p> <p>For those who subsequently complete the full industry competence requirements,</p> <p>For those construction professionals who achieve an NVQ Diploma Level 4-8 in the new QCF in a relevant occupation.</p> <p>To gain this card, applicants also need to pass the Managerial and Professionals (MAP) health and safety test.</p>
Professionally Qualified Persons (PQP) Card	Yellow	<p>For those who elect to progress direct via an academic and Initial Professional Development Route to Professional Institution Membership.</p> <p>All competence assessed members of relevant professional bodies (a full list is at www.cscs.uk.com/professions) can apply.</p> <p>To gain this card, applicants also need to pass the Managerial and Professionals (MAP) health and safety test.</p> <p>To assist in the achievement of a PQP CSCS card, an Fd should demonstrate attainment of knowledge and understanding, to satisfy the academic requirement of a professional body at an intermediate grade of membership.</p> <p>This would then need to be supplemented by satisfying the practice experience requirement of the professional body. As an example, an Fd developed in line with this Framework is likely to be appropriate for the Incorporate grade of CIOB membership.</p>

Table 9.1 CSCS Card Types

At the higher levels (Gold and Black), there are two routes for obtaining a full CSCS card – via the attainment of a relevant NVQ Diploma, or through membership of a professional body that has mapped its membership requirements to a relevant NVQ Diploma. Both of these routes require the acquisition of relevant underpinning knowledge – which a Fd can provide.

NVQ Diplomas are in the process of being migrated from the existing 5 level National Qualifications Framework to the new 8 level Qualifications and Credit Framework where, during 2010, they will become NVQ Diplomas and also be credit rated for notional learning time.

The content of an Fd in Construction Operations Management, provided it is informed by the NOS, will help students develop much of the knowledge component required to subsequently achieve an NVQ Diploma that are part of attaining an NVQ Diploma. The NVQ Diploma is also based on knowledge, skills and understanding identified in the NOS.

The relevant NVQ Diplomas in the context of this Framework Specification are:

- Construction Site Supervision level 3
- Construction Site Management level 6
- Construction Contracting Operations level 3
- Construction Contracting Operations Management level 6.

A CSCS card is also available for those who elect to progress direct via an academic and Initial Professional Development route to membership of a professional institution recognised and listed on the CSCS website.

9.3 Health and Safety Test

A common requirement for the achievement of all CSCS cards, is passing a relevant CSCS Health and Safety Test. An Fd programme in COM should include an individual unit/module covering health and safety processes, but health and safety should also be delivered in the context of other topics in the programme to help prepare people for passing the separate Higher Managerial Health and Safety Test (known as MAP).

Further details of the various cards, health and safety tests, the application process and the conditions which apply to them can be found on the CSCS website [30]

9.4 Mapping of Fd Content for Supporting CSCS Card Attainment

Fds and NVQ Diplomas are qualifications with different characteristics, both meeting some of the professional institutions' requirements. An Fd can be tailored to deliver a proportion, but not the entirety, of the underpinning knowledge and understanding and provide evidence towards some of the work-based skills and competence required to achieve an NVQ Diploma and thus support attainment of the CSCS card.

There will invariably be, however, a need for the learner to fill in gaps of knowledge and understanding, as well as gain experience in the workplace (after or alongside the Fd) to develop the skills and competence in the work activities required by the NVQ Diploma/professional membership - thus allowing attainment of the relevant CSCS card.

Ideally, the Fd programme should be delivered in conjunction with the development of the individual's portfolio of evidence to satisfy either an NVQ Diploma or professional membership. Providers could consider working in partnership with an NVQ Assessment Centre to facilitate this process. Appendix 10 contains additional guidance on NVQ portfolio building.

Two Fd programmes studied in the background research on 'demand led' courses [7] have used a mapping approach effectively to demonstrate alignment of the Fd curriculum content with NOS and NVQ Diploma requirements – thus providing an overview of where evidence can be generated for NVQ Diploma purposes.

ConstructionSkills have also produced mapping information to identify where particular topics/subjects potentially underpin particular Units in sector NVQ Diplomas. This is available at [31]. This facility has been used in the development of this Framework.

It is advisable for Fd providers to develop mappings for their own programme.

At the level of module curriculum content, the mapping in Appendix 11 illustrates how relevant information and evidence emerging from a particular Fd can be summarised and communicated for NVQ Diploma and/or professional membership and consequent CSCS card purposes.

Appendix 11 relates the content of the various Fd modules to the content of units in the NVQ Diploma level 6 in Construction Site Management. Two site manager routes within the NVQ Diploma are considered – a) Building and Civil Engineering and b) Conservation.

The mappings illustrate 1) where the Fd module provides underpinning knowledge for attainment of the NVQ Diploma unit and 2) where the Fd modules may provide evidence of competence to support attainment of the NVQ Diploma unit.

To undertake such a mapping, it is advisable to make direct use of the specifications set out in the relevant NVQ Diplomas and guidance on the use and application of NOS provided by ConstructionSkills [20,21].

Following a mapping process such as that in Appendix 11 will enable learners to reference their achievements from the Fd as supporting evidence in building up their NVQ Diploma portfolio and to help satisfy professional body requirements and for CSCS card purposes.

10. THE LEARNER AND TARGET LEARNER PROFILE

10.1 Accessibility

An Fd is intended to provide access to higher education for people from a variety of backgrounds and starting points in terms of qualifications and experience.

Individuals deciding to complete an Fd in COM may have

- experience without qualifications
- qualifications (academic or vocational) with considerable experience
- qualifications (academic or vocational) with little experience

Within the defining characteristic of 'accessibility', it is important to provide individuals with appropriate support and quality of learning opportunities to ensure they have a high chance of successfully completing the programme in the allocated time.

Consideration must therefore be given to curriculum content, assessment and academic support. In addition, some learners may benefit from access to pre-Fd courses to address any gaps before they embark upon a Fd, or at least access to a 'booster' module alongside their Fd. This is particularly the case for Diploma or A level entrants with no prior experience or entrants without qualifications.

In the background research report [7], employers placed strongest emphasis on the view that one of the key target learner profiles for this Fd is someone currently in relevant employment with sufficient construction contracting experience in a site or office-based role. Broadly, therefore, employers see the Fd as a key tool for up-skilling those who are currently employed in the construction sector and have a relevant level of existing experience.

10.2 Learners' Motivations

Individual learners will have different motivations, or in some cases a complex mix of motivations, when deciding to embark on a Fd in COM. Their motivations to complete an Fd may include:

- Wanting greater knowledge, skills and confidence in an existing area of work
- Ambitions to progress with an existing employer or occupational area
- Skills and a qualification to support a change of employment

- Development of knowledge and skills in a new area – such as a technical specialism, management or commercial focus
- Wanting to prepare themselves for modern methods of construction contracting resulting from changing patterns of operations and practice
- Wanting to work towards an Honours degree
- Wanting Professional Institution recognition or membership
- Needing an appropriate NVQ Diploma and CSCS card
- Wanting knowledge and skills to better manage an existing or new business
- Meeting employer/peer/professional/family expectations

The decision to complete a programme may be an individual choice, an employer's suggestion or agreed between an individual and their employer.

Some individuals and employers will be attracted to an Fd as a worthwhile qualification in its own right. Others may favour it as a route towards achievement of full honours degree or to support their achievement of an NVQ Diploma, CSCS card or professional body membership. Some will make up their minds about whether they want a 'top up' to an honours degree during or after they have completed an Fd.

Those who want to progress to achieve an honours degree will often require the same accessibility and delivery mode(s) as were offered for their Fd. In addition, some people may need to access honours degree provision in a different location from where they completed their Fd. This means that an Fd gained with one provider should ideally be recognised as giving access to further honours degree study with other providers.

10.3 Typical Learner Intake Categories

This Framework Specification identifies 6 potential intake categories. These are as follows:

- GCSEs or A-Level entrant
- 14-19 Diploma entrant
- Mature entrant from a non- construction/built environment background
- Mature entrant from a construction/built environment non-contracting area
- Craft or technical apprenticeship Level 2 or 3 entrant
- Mature entrant – craft, technical or supervisory contracting role

Providers, individuals and their employers will need to profile entrants (see below), then define an appropriate quality of support and learning opportunities to ensure each individual has the best chance of successfully completing their programme in the allocated time.

10.4 Criteria for Profiling Learners

In order to identify the profiles of prospective entrants to the Fd against the above categories, and discuss their requirements, it is suggested that the following criteria are used

- 1) Certified educational achievement (including UCAS tariff)
- 2) Relevant work experience
- 3) Current employment or work opportunity

10.5 Typical Learner Intake Profiles

The above tools enable the identification of a number of typical intake profiles of prospective learners at entry to the programme. Table 10.1 below, identifies these and indicates the potential support and other activities/investigations likely to be needed at intake to assist the learner to complete the programme.

	LEARNER INTAKE PROFILE		
	Certified educational achievement (including UCAS tariff)	Relevant work experience	Current employment or work opportunity
GCSE or A-Level entrant	yes	check	check
14-19 Diploma entrant	yes	yes APL?	check
Mature entrant from a non- construction/built environment background	Check APL?	yes	check
Mature entrant from a construction/built	check APL?	no	check

environment non-contracting area			
Craft or technical apprenticeship Level 2 or 3 entrant	yes	yes APL?	check
Mature entrant – craft, technical or supervisory contracting role	check APL?	yes	yes check?

Table 10.1 – Learner Intake Profiles

10.6 Implications for learner development

It is likely that a given intake cohort will contain a mix of people with a range of the profiles above. This could be very advantageous in terms of group learning using different people's experiences.

Nevertheless, it may be necessary to allow for some differentiation of delivery strategies, assessment methods and curriculum content within a given programme to support all individuals in reaching the same endpoint in terms of intended programme learning outcomes. For some intake profiles, offering pre-Fd bridging studies or booster modules is likely to both increase the pool of potential Foundation degree students and maximise successful completion rates. This could include, for example mathematics, ICT, study skills for those returning to learning and/or general familiarisation with the construction industry and its operations.

Although students from the various starting profiles will have achieved the same set of programme outcomes when they successfully complete their programme, they may continue or progress to a range of job roles depending on their industrial experience(s) and motivations – see Section 10.2 above .

11. PROGRAMME STRUCTURE, CURRICULUM CONTENT AND KEY LEARNING OUTCOMES

11.1 Programme Structure and Curriculum Content

A clear message came through from the background research [7] that employers would appreciate consistency in subject matter across the COM Fds on offer. If Fds are too diverse this will act as a barrier to generating understanding and acceptance.

Consistency will:

- help to build recognition of the qualification. Employers want to know what they are buying;
- give employers certainty about the level and coverage of knowledge and skills represented by the qualifications of job applicants;
- develop progression to and recognition by, professional bodies;
- enable transfer of students from one provider to another if needed, both mid-course and to further level 6 learning, for example a degree.

The subject matter and indicative content set out in Figure 11.1 and in more detail in Table 11.1 is derived from the detailed analysis of learning needs in NOS and vocational qualifications carried out by ConstructionSkills. Details are given in Appendix 3.

The development and refinement of the subject areas into learning outcomes can be further informed by the knowledge specifications within the related NOS and higher educational aspects required in a Fd graduate..

This subject content outline in Fig 11.1 and Table 11.1 therefore takes into account:

- Requirements of QAA, relevant professional bodies and the guidance produced by **fdf**;
- Employers' needs as expressed through ConstructionSkills research, consultation, NOS and Labour Market Intelligence;
- Provider practice identified through research and consultation through key sector bodies and industry certification scheme requirements such as health and safety.

It is designed to be broad enough to allow individual providers to respond to the needs they have identified, while retaining a level of consistency to support credibility within the sector.

The link to NOS provides a robust basis on which to broadly articulate the current industry skills and underpinning knowledge needs for COM. Consequently the subject areas identified are considered to be relevant across a variety of related industry roles.

Subject coverage in Fig 11.1 and Table 11.1 has been identified as the potential equivalent of full or half modules to which provisional titles have been given.

However, it is not possible to be precise about the number of modules that should be taken because different universities have different credit rating guidelines and assessment regulations. Broadly, the credit rating of a module corresponds to a notional volume of learning effort in hours in the ratio 1:10. As an example, a module or unit of 15 credits would be equivalent to 150 hours of learner effort. Learner effort comprises all activities needed to achieve the module outcomes, including lecture attendance, online learning, completion of assignments, private study and WBL activity. The lowest common denominator for the size of a module is likely to be 5 credits – equivalent to 50 hours of learning. Commonly known as a 'bite sized chunk' of learning, some guidelines for 5 credit modules are given at the www.constructionsite.org.uk resource repository. The Fd is a total of 240 credits. The broad indicative programme structure presented below is designed on the basis that 120 credits will be at level 4 and 120 at level 5. The topics indicated, together with any others of a specialised local nature, can readily be utilised to occupy 120 credits at each level as well as meeting industry and professional body requirements – see separate sections.

Indicative Programme Content					
Level 4 (120 credits)			Level 5 (120 credits)		
Project Development Processes					
Construction Technology & Processes A					
Construction Operations Processes A					
Environment & Services	Procurement & Contracts				
Health & Safety Processes	Regulatory & Legal Contracts				
Environment & Sustainability	Communication Techniques A				
Construction Technology & Processes B					
Construction Operations Processes B					
Environment & Services	Cost Control Processes				
Organisation & Industry	Maintenance & Trade Constrn.				
Communication Techniques B	Working with Others				
Research, Analytical Skills & Personal Development					
Subjects may need to include underpinning maths & science and other transferable skills (see Indicative Programme Content)					

Fig 11.1 – Indicative Programme Content

Level	Topic area	Likely weighting	Themes	Level	Topic area	Likely weighting	Themes
LEVEL 4	Project Development Processes	2	<ul style="list-style-type: none"> •planning •identification of client needs •project briefs •design processes •surveying processes 	LEVEL 5	Construction Technology & Processes B*	2	<ul style="list-style-type: none"> •construction technology •materials •methods •buildability •site establishment & production processes •construction plant & equipment •demolition/decommissioning
	Construction Technology & Processes A	2	<ul style="list-style-type: none"> •construction technology •materials •methods •buildability •site establishment & production processes •construction plant & equipment •demolition/decommissioning 		Construction Operations Processes B*	2	<ul style="list-style-type: none"> •project risks •project team formation/partnering •work method statements •resource/supply management •programming •information control •project appraisal
	Construction Operations Processes A	2	<ul style="list-style-type: none"> •project risks •project team formation/partnering •work method statements •resource/supply management •programming •information control •project appraisal 		Environment & Services Technology B*	1	<ul style="list-style-type: none"> •environmental services design •physical factors •physical testing
	Environmental & Services Technology A	1	<ul style="list-style-type: none"> •environmental services design •physical factors •physical testing 		Cost Control Processes	1	<ul style="list-style-type: none"> • measurement & bills •value •cost control •cost estimating •cost
	Procurement & Contracts	1	<ul style="list-style-type: none"> •procurement tendering methods and processes •contract forms & criteria 		Organisation & industry Context	1	<ul style="list-style-type: none"> •organisational management •economic context •social & industry factors
	Health & Safety Processes	1	<ul style="list-style-type: none"> •Health •safety •welfare & security risk management •CDM requirements 		Communication Techniques B*	1	<ul style="list-style-type: none"> •information presentation & communication methods •IT applications •organisational communications •information systems

Regulatory & Legal Controls	1	<ul style="list-style-type: none"> •legislative & regulatory requirements •legal/common law factors 	Maintenance & Traditional Construction.	1	<ul style="list-style-type: none"> property management •maintenance and repair requirements •heritage & conservation factors
Environment & Sustainability	1	<ul style="list-style-type: none"> •environmental impact •protection and sustainability •sustainable resources 	Working with Others	1	<ul style="list-style-type: none"> •learning & skills development •team management & leadership •working relationships •meetings & customer care •managing client relationships
Communication Techniques A	1	<ul style="list-style-type: none"> •information presentation & communication methods •IT applications (including CAD) •organisational communications •information systems 	Research, Analytical Skills & Personal Development	2	<ul style="list-style-type: none"> •coverage of data gathering •research •investigation •consultation & analysis •professional ethics & liability •personal management & development •professional membership

Table 11.1 Indicative Programme Content

11.2 Key Learning Outcomes

At module level, it is necessary for providers to develop learning outcomes that include the appropriate levels of academic rigour (analysis, critical evaluation, synthesis) and skills/competence development which align with and are supported by the curriculum/subject matter in the module.

Broadly, module level outcomes are categorised and listed under the following headings [6]

- 1) Knowledge and Understanding
- 2) Cognitive/Intellectual Skills
- 3) Practical Skills
- 4) Subject specific Skills
- 5) Generic/Transferable Skills

Work-related skills and competencies developed within a module would be listed under 3) and 4). Module learning outcomes will be set at Levels 4 or 5 – depending upon the level of the module [1].

At the programme level, a similar (overall) set of key learning outcomes (KLOs) must also be defined for inclusion in the programme specification document. These programme KLOs are most conveniently also structured under the above headings and are derived from a synthesis of relevant module learning outcomes. They can be developed to ensure alignment, as far as possible, with relevant external reference points and the requirements of NOS relating to COM and CSCS cards.

It is important, however, that programme level KLOs must also involve higher educational as well as vocational skills outcomes, as at module level - see Section 6.1. These are related to categories 1, 2 and 5 above. These should be defined by individual providers on the basis of the curriculum, WBL and assessment strategies they adopt.

The higher educational KLOs indicate how the learner develops through an integrated theory/practice mix. The approach and ethos is very different from that of vocational NVQ/Diploma awards, because the supporting knowledge and understanding explores not merely the skill or competency involved but the underlying assumptions, theory and research that informs evidence-based practice.

This is crucial to understanding the role of WBL in an Fd and its development of higher level cognitive and intellectual skills which characterise higher education. This contrasts with the situation within NVQ/Diplomas, with their emphasis on applying knowledge to very specific and concrete situations. This tends not to promote deeper levels of

understanding, the transfer of knowledge between different contexts and conceptual thinking. Whilst this is not always the case, this type of award may not be ideally placed to produce the type of individual needed to handle future challenges in COM - see also Section 6.1. To paraphrase a concept in the Handbook for the **fdf** Fd Endorsement Service [36]

As much as the history student may study the fall of imperialism in Russia to develop higher level thinking skills, a work based learner in COM may study the environmental and sustainability performance on a construction site to develop their critical and analytical skills. For work based learners in higher education – work is the subject.

Given below is an indicative set of programme KLOs covering the above points which a provider might consider to use as a starting point when developing the full set describing a programme. It is important, overall, for these to be set at Level 5 of the FHEQ [1].

Fd graduates in COM will:

- Understand and appreciate the principles and theories applying to construction operations management (COM) including the regulatory and statutory framework
- Be able to describe and evaluate the characteristics of building methods, materials and components
- Understand the legal, economic, design and environmental considerations and techniques that govern the sector
- Be familiar with and be able to recommend changes to the commercial and business practices and management approaches used in the sector
- Have the analytical, theoretical, evaluative and problem solving skills necessary to function in COM
- Have knowledge of underpinning mathematical and scientific concepts required to succeed in a modern COM position and make professional judgements
- Develop standards of professional conduct and knowledge of ethical responsibilities, including the global and social context, required by relevant professional bodies and preparation to become members at a relevant grade
- Have a broad understanding of the role of COM in contributing to sustainability and be able to evaluate decisions and make recommendations taking sustainability considerations into account
- Develop and enhance their transferable skills in areas such as communication and working with others, ICT, CAD, research methods, managing their own learning and career management.

12. DELIVERY

12.1 Introduction

It is likely that a given entry cohort to a Fd in COM will contain a mix of people with a range of the profiles – see Section 10. This could be very advantageous in terms of group learning using different people's experiences.

Nevertheless, it may be necessary to allow for some differentiation of delivery strategies to support all individuals and these should reflect the needs of the diverse range of learners that the programme can cater for. It is important that the delivery mode is appropriate for the type of learner studying on the programme. This will maximise the benefit of the qualification to both learners and the return to the employers.

Central to the delivery of Fds is work based learning (WBL), which is covered in detail in Section 14. Since WBL can be delivered in various ways, we use the term 'simulated WBL' to describe WBL which is designed to simulate in some way an element of the workplace without the learner actually being there e.g. a case study or a live brief. The term 'situated WBL' is used to describe WBL which actually takes place in the workplace. Situated WBL is always in the workplace, whereas simulated WBL may not be. A typical course will contain WBL delivered using a combination of these approaches.

As far as the impact on the delivery strategy the different types of learners embarking on an Fd can be broadly classified (see Section 10) by their extent of certified prior educational achievement and their relevant work experience – certified or otherwise. The matrix given below in figure 12.1 shows how this leads to six different categories of learner – these categories can be used to consider appropriate delivery strategies.

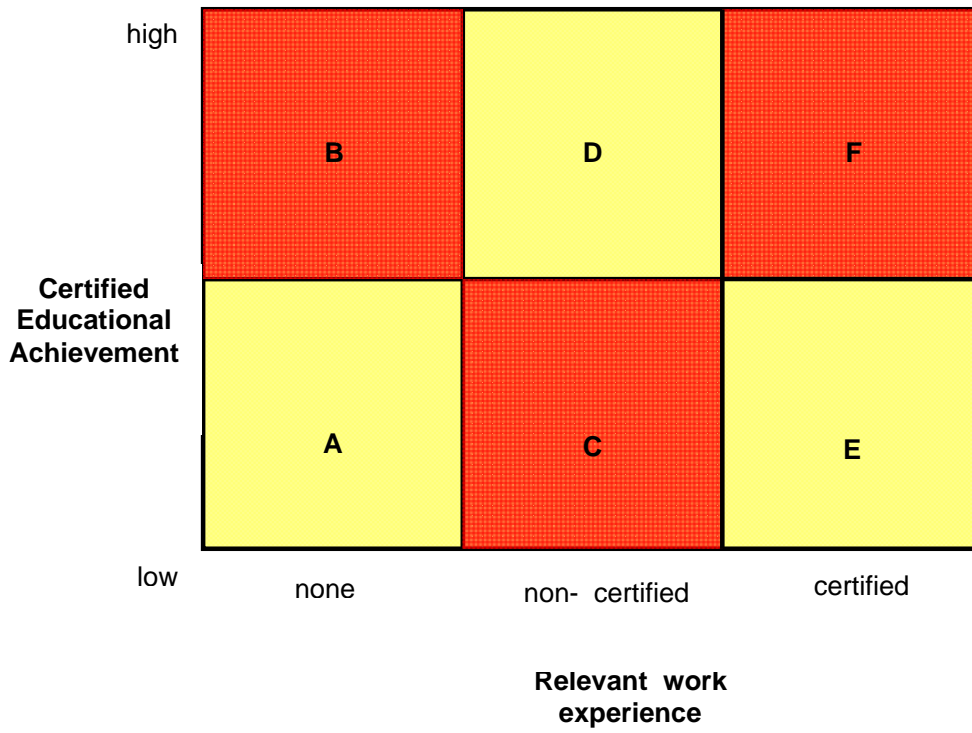


Figure 12.1 Different types of learner who may study on a foundation degree.

Each of the categories is described below in Table 12.1 along with a brief comment on the type of delivery style that might be most suitable

Category	Profile	Delivery style/strategy
A	Limited level of academic attainment with little or no relevant work experience.	It is unlikely that a delivery strategy would be developed solely for this type of learner. However, a mature learner from a non-CBE background maybe able to satisfy APEL criteria.
B	High level of academic attainment with little or no relevant work experience.	This category will include the traditional school leaver who would enter the programme using UCAS points. They would require the normal support for development of their academic skills. These types of learners will benefit from work experience but may require a blend of traditional academic, simulated and situated WBL. A delivery strategy based solely on the workplace and situated WBL is unlikely to be a natural fit for these learners.
C	Low level of academic attainment with non-certified work experience.	This category would include the mature entrant who has worked in the CBE sector but does not have any formal academic qualifications. This type of learner will typically require more than the normal level of support for their academic development. Their experience should allow them to benefit from both simulated and situated work based learning.
D	High level of academic attainment with non-certified work experience.	This learner may have the required UCAS points or QCF credits to enter the programme but is likely to be more mature and there will be a gap from their previous academic study. They may require some support to refresh their academic learning. As with category C, their experience should allow them to benefit from both simulated and situated work based learning
E	Low level of academic attainment with certified work experience.	This category would include the mature entrant who has worked in the CBE sector but does not have any formal academic qualifications. They may have NVQ Certificate/Diplomas or other industry training certificates. This type of learner will typically require more than the normal level

		of support for their academic development. Their experience should allow them to benefit from both simulated and situated learning.
F	High level of academic attainment with certified work experience.	This type of learner may be from a background such as the 14-19 Diploma or alternatively have the required UCAS points or QCF credits with certificated experience such as an NVQ Certificate/Diploma, professional or other industry training certificates. Their experience should allow them to benefit from both simulated and situated WBL.

Table 12.1 Delivery strategies for different types of learner who may study on a Foundation degree in COM.

The matrix and table above provide a mechanism for identifying which learners may enter an Fd based upon their level of academic attainment and work experience. Because of the different delivery requirements, a single Fd may only be designed to cater for one or two of these types learners. This will depend on the level of resources, facilities and WBL opportunities available with a particular provider. The following sections address the development of an appropriate delivery strategy in more detail.

12.2 Modes of Delivery

As with any higher level qualification there are a number of modes of delivery to select from. These include:

- Full-time (traditional)
- Part-time (day release, block release, evening classes)
- Distance Learning

Although there is a strong tradition of day release, block release and in some cases evening classes within the construction and built environment sector, it is worth considering the impact that WBL (situated or simulated) could have on these models. Work based learning uses the work situation as a framework for the learner's study. This facilitates theory being understood in the context of practice and vice versa – see Section 14.

When developing an Fd, particularly if in response to a smaller number of large employers, it may be worth reviewing whether these activities need to follow the traditional approach and remain separate? Adopting a traditional model of block release or day release can mean people being away from the workplace longer than necessary, increasing the time lost to the employer and increasing the cost

of the programme fees. Integration of the learning with the student's work activities will need both the provider, learner and employer agreeing to accommodate the necessary arrangements for effective WBL. Providers will need to help employers and learners appreciate the longer-term benefits of properly managing the demands of the learner's work commitments alongside the programme requirements.

Ideally, the Fd programme should be delivered in conjunction with the development of the individual's portfolio of evidence to satisfy either an NVQ Diploma or professional membership, thus a CSCS card (see Section 9).

Dependent on the original starting points for learners, attainment on the Fd programme may require different delivery patterns. The extent to which the actual 'real life' workplace is used as a delivery vehicle for WBL will depend on the intake profile of the learners entering the programme and their access to a workplace. Figure 12.2 below illustrates the range of different WBL delivery styles that can be developed on a spectrum from traditional lecture-based, through simulated WBL to fully enabled WBL situated in the workplace.

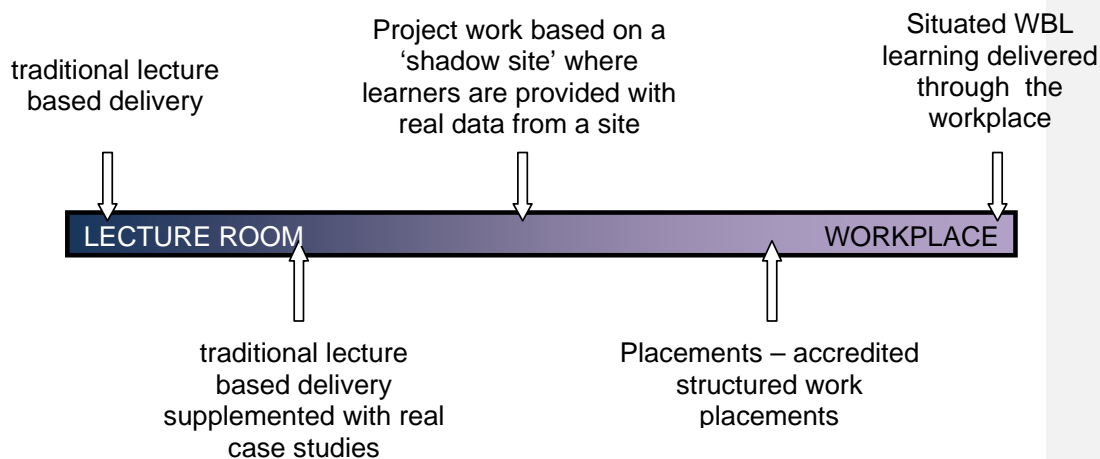


Figure 12.2. Spectrum of WBL delivery strategies from lecture room to workplace

There are many other examples which could be placed upon this spectrum and a given programme may need to involve a mixture of these strategies across modules to match learner profiles. The workplace end of the spectrum offers a great opportunity for innovative delivery strategies. A fuller discussion of the underlying philosophy of WBL is given in Section 14.

It is important to note that all Fds should include WBL at relevant points on the above spectrum. However, the extent to which situated WBL is deployed will depend on the type of learner. For those with experience of the industry, who are in a strong position to use the workplace as a vehicle of delivery, significant proportions of situated work based learning may be appropriate. Learners with little or no experience may gain a good appreciation from 'simulated' WBL, if a larger proportion of projects or case studies based upon real life scenarios is used.

In the above context, the delivery of a traditional full time Fd to students not in employment or with no knowledge of the workplace can prove difficult. Work-placements can be utilised, but this may prove challenging to coordinate theoretical learning with work placement activities at the right level. It also runs the risk of the Fd becoming more-or-less a conventional (e.g. Higher National) course.

13. ASSESSMENT GUIDELINES

13.1 Introduction

It is important that assessment strategies in the Fd are developed and integrated in the programme considering employers needs, professional body requirements (see Section 8) and the industry CSCS certification scheme (see Section 9). As with the development of delivery strategy, it is important also that the assessment methods are balanced and appropriate for the learner's profiles and preferred learning style(s).

Overall, the assessment strategy must meet the requirement to assess and measure a student's achievement against the programme's learning outcomes (summative assessment), whilst also encouraging learning and helping the learner to develop reflection and interpersonal skills (formative assessment) . [32]

13.2 Developing an assessment strategy

In order to generate an effective assessment strategy the following should be considered:-

- Coverage of all learning outcomes
- Methods that are appropriate to the type and depth of learning
- Blend of formative and summative assessment.
- Overall portfolio/mix of assessment at the programme level
- Context of assessment – is this the workplace, classroom, project etc?
- Whether specific forms of assessment are useful in preparing for further progression e.g. exams to prepare for later Honours level study

Effective assessment is important:-

- To measure the achievement of specified learning outcomes as a basis for pass/fail/grading decisions in a particular module
- To establish if a student has understood key aspects and is ready for the next step
- To provide feedback to students and also to establish if a different learning style may be required
- To establish what is required of learners and to motivate them to achieve this
- To establish if learners meet the requirement for the programme

- To provide professional institutions, HEIs and industry certification schemes evidence of the knowledge, skills and understanding the learner has gained

13.3 Assessment techniques

There are a range of different assessment techniques available to programme designers which can be employed alongside different delivery strategies. These include, but are not limited to:

- Exams
- Essays
- Reports
- Presentations
- Group work
- Project work
- Logs or journals
- Observation
- Research
- Portfolios

As indicated in Sections 10 and 12, there are a variety of possible learner profiles which could be present on a given programme and it is important to create a balanced, varied assessment portfolio/mix across the modules, as different individuals respond to different assessment methods.

13.4 Assessment of Work based Learning

The broad concept of WBL has been indicated earlier and is covered in detail in Section 14.

Many if not most learning outcomes at module and programme level can be assessed using WBL approaches. As with delivery strategies, WBL assessment methods can be placed upon a spectrum from lecture room through to the workplace – with a mixture of assessment vehicles being used. Figure 13.1 shows this spectrum and gives a few examples.

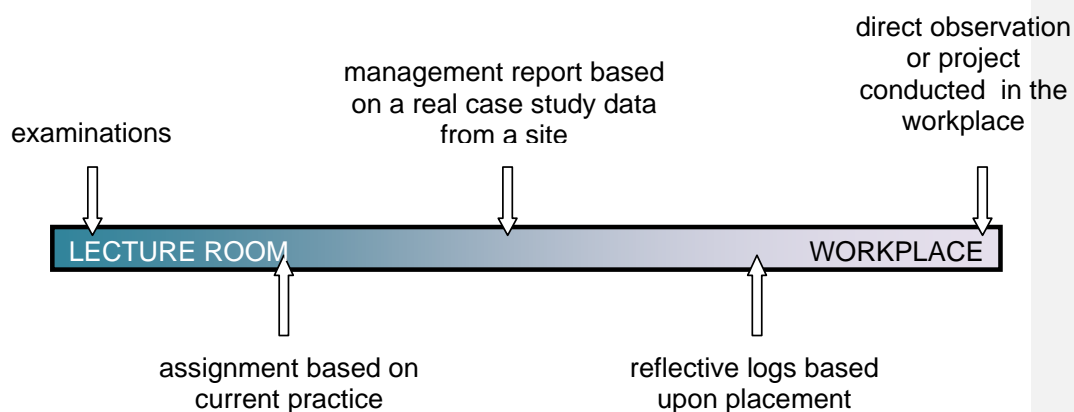


Figure 13.1 Spectrum of WBL Assessment Strategies

There are many other examples which could be placed upon this spectrum.

In terms of providing assessment of work-based learning for the separate attainment of an NVQ Diploma and CSCS card, careful consideration and mapping of the above is needed at programme and module level. This is because an NVQ Diploma may demand certain outcomes and skills to be demonstrated and verified only in the workplace.

Ideally, the Fd assessment strategies should be designed in conjunction with the development of the individual's portfolio of evidence to satisfy either an NVQ Diploma or professional membership, thus a CSCS card. Providers could consider working in partnership with an NVQ Assessment Centre to facilitate this process. Appendix 10 contains additional guidance on NVQ portfolio building.

14. WORK BASED LEARNING

14.1 What is Work Based Learning?

WBL has been defined as learning at higher education level derived from work [33]. Whilst there are other definitions, this is the approach adopted in this Framework Specification. It suggests that a person can learn appropriately from work but it also assumes that the workplace is able to provide, directly (situated) or indirectly (simulated), the appropriate opportunities for the learning to take place. WBL is therefore learning that occurs as a consequence of activities based in or on work, that have been built into the curriculum.

WBL does not necessarily, therefore, have to be undertaken when situated in the actual workplace – although this is one option. In this context, it is important to note that alignment of the Fd with NOS, NVQ/Diploma and CSCS requirements will require some/all work based skills to be actually demonstrated in the workplace. It is important that Fd providers make these aspects explicit and map them clearly for this reason.

WBL is a mechanism for learning and not the subject or discipline of study [34]. Therefore it may be used to enable a learner to achieve some or all of the learning outcomes of a programme but is not itself part of the learning outcomes. A student does not pass or fail the WBL *per se*, but the related learning outcomes being assessed.

WBL can be difficult to arrange, and expensive to manage. It raises concerns about quality of learning, equity of experience, credit value and assessment. Nevertheless, it is an essential component of Fds.

Strategies for WBL in an Fd may use simulation or other methods such as the use of case study, projects or live briefs to increase work related reflection, as well as activities actually situated in the workplace. A personal reflective record kept by the learner can be a valuable in this context. Section 12 discusses this further in the context of delivery of WBL.

The following principles should underpin the design and operation of Work Based Learning (WBL) in the Fd in COM

- WBL is a key characteristic of an Fd and it is the feature that is its most distinctive element. Authentic and innovative WBL is an integral part of Fds and their design. It involves the development of higher level learning within both the institution and the workplace and is a two way process

- WBL recognises the value of work as a source of knowledge and experience; it makes work the subject of study. The workplace is an important learning vehicle and WBL brings the methods and academic rigour of higher education to the curriculum and experience of working life.
- WBL develops critical thinking and reflection through learning activity designed and tailored for the individual, involving elements of blended learning, accreditation and support. It puts the learner's development first, creating a flexible learning experience that is delivered through work, in work, by work.
- WBL within the programme must be of sufficient duration and suitably structured to enable the learner to demonstrate all the agreed WBL outcomes. Ideally the WBL should be integrated across the programme with every module requiring reflection on experience derived from the workplace.

WBL is all about developing the 'reflective practitioner' capable of deep reflection and adjustment of their practices via learning through work.

WBL is all about linking theory to practice and vice versa, thus, theory can help decide appropriate adjustments or interventions in practice AND, practice can help upgrade, modify and contextualise theories to make them more useful.

The geographical location i.e. where WBL takes place is of secondary importance. It actually takes place in the student's head and can utilise 'situated' or 'simulated' strategies. The application of the WBL can have positive impact on 'business performance', the student's own practices in the business and academic theory.

WBL focuses study on the learner's own role and experiences in relation to work; it is about developing knowledge through the performance or consideration of work.

Formal WBL maximises the value of the learning for both the individual and the organisation; it makes tacit learning explicit.

14.2 Employer involvement and support

WBL should ideally be designed so that, if the learner is employed, it contributes to the business objectives of the employer. For example, a project might be specified to research and generate solutions to address a specific employer

issue. The brief determined by the provider would clearly need to be sufficiently general to be capable of interpretation and action in a range of workplace environments.

Employers can also contribute by offering clear opportunities for personal development and by helping the learner to relate the outcomes stated in their learning plan to desired organisation outcomes. These might be derived from targets or objectives in a personal appraisal.

In this context, providers should ask employers to:

- provide information on how the Fd can support business objectives
- take part in induction on how and when they can be involved in WBL and mentoring
- monitor learner learning and progress, for example through three-way reviews between the learner, employer and tutor
- assist in understanding assessment procedures, and contributing to assessment if possible
- comment on the proposed delivery and assessment strategy for the programme e.g. through annual reviews.

In relation to the above, opportunities to develop and assess knowledge, skills and understanding in line with the requirements of the NOS and specific NVQ Diplomas should also be considered.

In cases where individuals may be undertaking an Fd without the direct support of a current employer, involvement of placement providers or others providing some 'situated' WBL opportunities may follow the above guidelines.

14.3 Student involvement and support

The student is a major stakeholder in determining any project brief for reflection on or problem solving in the work environment. The learner will need opportunities to enable them to undertake appropriate roles and activities, thus giving them an opportunity to apply the skills and knowledge they are acquiring. They will need opportunities which will allow them to test theories in the work setting and reflect on their actions and to take an active part in both the planning and execution of their programme.

For best results the learner needs to be an active participant, choosing what and how they learn and being self directed and curious. But even those attributes may not be enough. In order to formulate and research appropriate projects they will also need the confidence and influence within the organisation to access resources and/or be fully supported by a senior manager. The employer return on such an investment is immediately clear but the demands on education providers and student are increased. It is vital that all three stakeholders negotiate and agree appropriate learning opportunities and outcomes.

The role of the academic tutor is to help the learner think about the knowledge they require (or indeed already have) and also about what criteria will describe their work based learning. The tutor also needs to provide appropriate frameworks and support for such activities, in partnership with the employer or placement provider.

Tutors may need to empower the student to develop contingencies or fall back strategies in the event of change of employer, redundancy or becoming self-employed. These activities produce the curriculum and the learning outcomes for a negotiated learning plan or contract.

The academic tutor also needs to introduce the concept of 'level' and make sure that outcomes reflect the level and volume appropriate to the credit being sought in any negotiated learning plan. The tutor should also consider any opportunities to help the learner meet the requirements of the NOS/NVQ Diplomas and CSCS card attainment.

14.4 Assessment of WBL

Broad assessment guidelines for the overall Fd are given in Section 13, including some initial comments on the assessment of WBL as part of this. This present section focuses very specifically on the details of assessment of WBL.

WBL should permeate the whole Fd programme with some work-based assessment integrated in all modules where possible. A mixed approach could often be beneficial, with some entire modules being assessed through work-

based projects and others with a varied degree of work-based activity generally focusing on the application in the work place of the theoretical and/or case study/live brief elements studied in the classroom. This enables theoretical aspects to be contextualised and provides the impetus and a structure for individuals to learn more about their business and the COM sector.

Management of the assessment of WBL may require flexibility from providers with regard to traditional conventions that may restrict opportunities for assessment - for example, a mismatch between the provider assessment schedule and the demands of the workplace.

The organisation of assessment must ultimately relate to the learning outcomes. So the overall ambition for assessment in a work based programme must be, as far as is possible, to use *work* to provide the opportunity to demonstrate learning

Assessment protocols should specify the criteria required to achieve the learning outcomes from all candidates to ensure consistency of standards.

14.5 Assessment Principles and Methods

Assessment of WBL must be [32]:

- Valid
- Facilitative
- Explicit
- Reliable
- Equitable
- Just
- Transparent
- Monitored

For a more detailed discussion on this in relation to WBL see [34].

It is appropriate to use a full range of assessment tools (see also Section 13), for example:

- Critical incidents
- Observation
- Contextualised report or case study
- Video

- Presentation
- Portfolio
- Any other method which meets the criteria for achievement of the learning outcomes

In all cases, assessment must bear some relevance to the workplace context. The choice of assessment strategies may well vary for different student intake profiles.

14.6 WBL outcomes

WBL learning outcomes should be set at Level 5 on the Framework for Higher Education qualifications [1]. Learning outcomes for WBL should relate to technical skills, occupationally relevant knowledge and professional, personal and interpersonal skills – which should be identified considering the NOS.

Fdf guidance [35] recommends that, for situated WBL, employers sign up to a tripartite learning agreement between themselves, the learner and the provider. This should outline the work which will be undertaken and the learning outcomes which will be assessed. The most successful approaches integrate this agreement with the process of on-going learner development reviews that might be education-based or employer-based.

A mechanism to encourage Learners and employers to comment on their WBL experiences and achievement of outcomes would be of value. This type of feedback is most efficiently obtained as part of an annual evaluation/review process – both at module and programme levels – with employers or placement providers being part of this process.

14.7 Summary of suggested roles and responsibilities in relation to WBL

The contributions to be made in managing WBL within the Fd programme will require that the roles and responsibilities of learner, programme leader, tutor, mentor and supervisor are clearly defined and that appropriate systems and schedules are in place.

It is essential that role descriptors are available in the student handbook and other course documentation, such as employer and WBL handbooks, for the benefit of all the stakeholders.

Learners

- Learners will engage as defined in the learning and assessment strategy which will accompany a programme specification.
- Various delivery and accreditation processes may be involved.
- The learner is likely to be best served if a *learning contract* is negotiated; the provider and employer providing the input needed to create the contract with the active involvement of the learner.
- Learning through the various approaches to WBL will ensue and it is likely that the learner will both collect evidence which demonstrates the tasks achieved *and* will create reflective statements demonstrating what learning has been achieved as a result of the tasks.

Programme Leaders (or equivalent)

- Will be responsible for the 'unpacking' of the programme specification into an operational plan.
- Will ensure that various handbooks and documents relating to WBL are accurate, complete and distributed to relevant parties at the right time
- Will be responsible for the general oversight of the allocation of tutors, supervisors and mentors for each learner. This will include ensuring that adequate staff development takes place in each case; that scheduled activities are taking place on time and achievements are to the standard required.

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Tutors

Tutors may have a key role in the management and operation of the *learning contract* for each of the learners assigned. Responsibilities will be many and varied and may include;

- profiling of students (see Section 10) and accreditation of prior learning
- accreditation of an employer's staff development provision
- identification of the working opportunity which will facilitate achievement of each WBL outcome
- identification of the remits required to demonstrate the achievement of each outcome
- the actual assessment of the outcomes being achieved
- pastoral responsibility for the learner in liaison with employer/mentor
- negotiation with supervisors as the circumstances of the WBL evolve.

WBL Mentor (Critical Friend)

- A work place mentor would typically be someone in the working environment with greater experience of most of the tasks of the job role and probably working at a more senior level than the learner.

- The mentor should act in a supportive role, rather than being in any way judgemental and should not be the line supervisor of the learner
- The mentor would provide a sounding board for the learner as the WBL challenges become more demanding – providing informal guidance as the learner develops the improved capability needed to handle these greater challenges, including any enhanced job challenges.
- The mentor would advise on the use of resources and give informal feedback on achievement of outcomes. Micro-businesses, self employed or owner managers may be limited in their scope to resource this role. As an alternative, a learner's mentor might be someone in another business with whom he or she is engaged in a project, rather than someone in her/his own business.

Supervisor/ line manager

- The supervisor in the work place must liaise with the named tutor in order to identify work which will provide the opportunities needed for a learner to achieve and evidence the learning outcomes of the qualification.
- The supervisor also has the key responsibility to ensure that this identified work is allocated to a learner with an adequate time frame.
- The supervisor should review the progress and attainments of each learner with the tutor
- The supervisor may also provide the link for the development of the NVQ Diploma portfolio for CSCS card and/or professional body development purposes.

15. PROGRESSION FROM THE FOUNDATION DEGREE

15.1 Introduction

This section addresses potential progression opportunities and pathways following completion of an Fd in Construction and Operations Management. Progression opportunities to higher FHEQ/QCF levels (levels 6 and above) in terms of academic education, vocational qualifications and associated professional body accreditation are considered in broad terms.

Common Progression routes are shown in diagrammatic form below in Fig 15.1.

Appendix 12 gives a more detailed overall progression map, including progression 'from' and 'onto' the award. The progression 'from' part gives more information on possible combinations of academic, vocational and professional progression and switching between these routes. The 'progression onto' part of the map should be read in conjunction with the learner intake profiles discussed in Section 9.

Professional body accreditation is addressed fully in Section 8 of this document, where an example of accreditation by the Chartered Institute of Building (CIOB) is considered in detail as an exemplar. Guidance on accreditation by other professional bodies, for example the Institution of Civil Engineers and the Royal Institute of Chartered Surveyors, will be addressed in future versions of this framework.

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Fig. 15.1 Common Progression Routes from the Fd

It is important to emphasise that the skills gained from the Fd, which combines academic and work based learning, allows pathways through FHEQ/QCF levels via higher education and vocational competence based routes.

The various levels indicate an increasing level of challenge in higher education and/or competence in a range of roles in COM, some may be broader, more demanding or technically specialist.

The following profiles may help students, employers and providers identify a suitable pathway. The pathway chosen will depend upon learner and/or employers wishes or needs. Switching between these pathways at higher levels is also possible.

15.2 Progression Pathway Profiles.

On the foregoing basis, the Fd is intended to form a springboard for progression of an individual through various routes and levels of higher academic education, vocational education, job roles, assessment and certification of competence, industry certification scheme and professional institution recognition.

Academic Pathways

For those candidates who require to progress through an academic route, the next level is honours degree. This can be achieved through a dedicated “top up” period of further study, or through joining level 6 of a suitable honours degree course. Providers of Fds are required to have this progression route designed and in place at the validation of the Fd – see section on HEI support for progression below. Opportunities with more than one honours provider could be advantageous for learner flexibility. Further study to level 7 (Masters level) is then possible following honours level study.

Job Role Progression

If the student is in employment during the undertaking of the Fd, the higher level knowledge and skills gained may allow the student to take on broader responsibilities and/or special studies and projects within the existing area of work. Depending on the starting point and work experience opportunities, they may have their competence assessed against the NVQ Diploma level 3 in Construction Site Supervision or Construction Contracting Operations level 3: NVQ Diploma Level 6 in Construction Site Management or Construction

Contracting Operations Management, then at level 7 the NVQ Diploma Construction Senior Management.

It would be expected that as part of developing the learning outcomes from the Fd, the student would also gain and increased awareness of

- Further knowledge of relevant jobs within their existing area of work.
- Understanding of higher level job roles and their specifications.

Although it is not intended that the completion of an Fd should be allied to a specific job role, it could be useful to employers, students or institutions to have some knowledge of potential higher level job roles to be considered after the Fd.

Pathways to Professional and Industry Certification Scheme Recognition.

Information about how the achievement of an Fd accredited by a professional institution can help an individual to progress towards gaining professional institution membership and industry certification scheme (CSCS card) recognition is outlined in sections 8 & 9.

15.3 HEI Support for Progression

An HEI or provider considering a student's application for entry into an Fd, is in a good position to provide guidance and support on the different progression routes available following completion. In order to do this, it is of importance to:-

- Understand the responsibility and input of the employer (if the student is in current employment) in terms of job progression and, where possible discuss opportunities with the employer.
- Consider the existing and proposed job roles which the candidate may achieve, to help successful completion and CIOB accreditation.
- Outline the development criteria and/ or identify whether any additional support is necessary for completion of the award.
- Give guidance on compiling a portfolio of evidence for NVQ Diploma Assessment purposes (see Appendix 4).

Further as indicated above, the provider of the Fd is required to guarantee articulation with at least one programme of study to allow achievement of a Bachelor's degree with honours at level 6.

As outlined in section 7, an HEI's internal approval and validation process is an ideal opportunity to generate and map relevant evidence to support onward progression in terms of vocational qualifications, CSCS card attainment and professional membership.

16. MARKETING OF Fds IN CONSTRUCTION OPERATIONS MANAGEMENT

16.1 The total marketing process

A total comprehensive marketing process for a COM Fd would include initial market research, employer engagement, advertising and promotion to employers and learners, feedback via employer and student forums, ongoing investigation of changing employer needs (customer relationship marketing) and student retention strategies. All aspects are a necessary part of course development, monitoring and review. It is essential to ensure that both employer and employee needs continue to be satisfied.

The following concentrates on marketing in terms of advertising and promotion to learners and employers.

16.2 Marketing to learners

The promotion of the award should recognise that there are as many different types of learner as there are employers. Information about the awards directed to learners should be written in a language they can understand. The benefits of obtaining the award should be emphasised and the progression pathways clearly signposted. An explanation of job functions and the way the award supports these jobs are essential, particularly for learners who are undertaking an apprenticeship. The promotion of the award should start from the moment the learner starts his/her apprenticeship.

For the more mature learner, the approach should perhaps be slightly different. Many employers strongly express the view that the target learner profile for an Fd in COM is someone currently in relevant employment. This person will have some years' site experience and will probably be looking either to develop into broader and better jobs or to develop more understanding of modern construction. Here it is important to encourage them back into education by emphasising all the support mechanisms that are available, including help with IT and personal skills development. There are aspects of learning that are now commonplace, such as distance learning or blended learning, that are rightly promoted as a strong benefit in terms of flexibility. However this may concern more mature learners who may not be up to speed with distance learning technology. So they should be assured that they will have initial support. These IT skills, along with personal skills development will be an essential part of most awards.

For all learners, the aspect that cannot be understated is WBL. The benefits of this learning mechanism and the way in which partnerships between learner, employer/placement provider and the college are managed should appear in all marketing material.

16.3 Marketing to employers

Many of the essential aspects of marketing are contained in the section on employer engagement. The advantages of the award will be more apparent to those employers that have made a contribution to the development of the award such that the design considers business needs.

While it is not possible for every employer to be actively involved, the knowledge that the course development process was employer driven will, through trade federations and professional bodies, become widely known.

In an ideal world, learners in employment will be supported by their employers throughout the duration of the award. The application of the work-based learning elements of the course can also be used to provide the employer with technical or commercial understanding and skills that otherwise may not have been available. These can be used to meet business needs as required.

This is particularly true in aspects of supervisory management. These aspects of work based learning need to be 'sold' to the employers. Employers may be familiar with the sector's other technical, supervisory, management and professional vocational qualifications but have no experience and information about the business benefits of Fds.

As outlined in Section 3, a core of active and committed employers will ensure that the award is relevant to their strategic workforce development plans. It is always necessary to explain how the awards will help to address higher level skills needs and it should not be assumed that employers know where their employees can fit into the qualifications framework. There is therefore a need to ensure that all marketing and promotional material encourages a diversity of learner applicant.

This Framework should make it clear, but few employers will have the time to digest it thoroughly. Clear, concise explanations written in plain language that highlight the business benefits should be provided. It should also be understood that the award can be tailored to local company specific needs and that attendance patterns can be as flexible as required.

16.4 Marketing Case Study Example

Appendix 13 contains an example of marketing and promotional material in leaflets produced for an award in Construction Project Management at Hull College, validated by Leeds Metropolitan University

REFERENCES

- 1) QAA Framework for Higher Education Qualifications FHEQ (www.qaa.ac.uk)
- 2) QAA Foundation Degree Qualification Benchmark (www.qaa.ac.uk)
- 3) Qualification and Credit Framework (QCF) for Vocational qualifications (www.cic.org.uk/activities/lifenos.shtml)
- 4) CSCS Card Scheme Requirements (www.cscs.uk.com)
- 5) Professional Body Requirements (www.cic.org.uk)
- 6) QAA Guidelines for the Production of Programme Specifications (www.qaa.ac.uk)
- 7) G. Edwards - Background Research Report - Demand Led Foundation Degrees in Construction Management (www.fdf.ac.uk)
- 8) QAA Code of Practice on Programme Approval, Approval, Monitoring and Review (www.qaa.ac.uk)
- 9) QAA Code of Practice on Work Based and Placement Learning (www.qaa.ac.uk)
- 10) Leitch Report 2006 – Prosperity for all in the global economy, world class skills (HM Treasury, London)
- 11) HEFCE Website (www.hefce.ac.uk)
- 12) New QCF Developments (www.cskills.org/supportbusiness/businessinformation/qcf/index.aspx)
- 13) Quality Assurance Agency for Higher Education - QAA (www.qaa.ac.uk)
- 14) Construction Qualifications Strategy (www.cskills.org/aboutus/sectorskillscouncil/sectorstrategy/qualificationstrategy/index.aspx)
- 15) Built Environment Skills Alliance -BESA (www.cic.org.uk/activities/lifebesa.shtml)
- 16) Construction Sector Skills Agreement (www.constructionskills.net/sectorskillsagreement/)

- 17) – see reference 14)
- 18) Joint fdf/CSkills Analysis of Fds in the Construction Sector (detailed reference or website needed)
- 19) CSkills Research on NOS and Skills Gaps
(www.constructionskills.net/research/constructionskillsnetwork/forecastmodel/constructionskillsnetwork_outputs/uk/)
- 20) NOS (www.cskills.org/supportbusiness/businessinformation/nos/index.aspx)
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- 22) QCF (www.qcda.gov.uk/8150.aspx)
- 23) Higher Level Generic NOS (www.cic.org.uk/activities/lifenos.shtml)
- 24) CSkills guidance on use of NOS to inform curriculum development (detailed reference or website needed)
- 25) – see reference 8)
- 26) – see reference 6)
- 27) The Chartered Institute of Building – CIOB (www.ciob.org.uk)
- 28) CIC Accreditation Research
([www.cic.org.uk/activities/lifeEducation.shtml\(HASH\)cqss5](http://www.cic.org.uk/activities/lifeEducation.shtml(HASH)cqss5))
- 29) CSCS Website (www.cscs.uk.com)
- 30) Health and Safety Tests for CSCS Cards (www.cscs.uk.com/health-and-safety-test)
- 31) CSkills mapping information relating to NVQ Diplomas (detailed reference or website needed)
- 32) QAA Code of Practice on Assessment (www.qaa.ac.uk)
- 33) Garnet 1997 (WBL Definition) (detailed reference or website needed)
- 34) Grey 2001 (WBL as a Mechanism for Learning) (detailed reference or website needed)
- 35) fdf Guidelines on Tripartite Learning Agreements (detailed reference or website needed)

36) Fdf – Handbook for fdf Endorsement Consultants (2009)

APPENDICES

APPENDIX 1 – OUTLINE PLAN FOR DEVELOPING A CONSTRUCTION FOUNDATION DEGREE

The following table gives an Outline Plan that was used for the development of an employer and sector led foundation degree in the construction sector.

The employer engagement process was based on the methods used for the successful implementation of a Foundation degree in Construction Project Management that was developed the previous year. The plan and process are therefore generic in nature.

Both awards were developed for the Humberside region with support from Aim Higher , YHELLN and fdf .

The plan covers all aspects of the programme development. The employer engagement parts are emphasised in bold type.

Outline Project Plan

This plan provides a base line model for practitioners developing employer and sector led foundation degrees within an academic year. It assumes that the award would be delivered by more than one provider in the region.

Key Stages/Outcomes	Key Milestones/Activities	Measurable Outcomes	Timescales
1. Providers Identified and Project Groups Established	<ol style="list-style-type: none"> 1. Issue Expression of Interest to gauge interest and commitment of partners to participate in the project. 2. Project Team composition, roles and responsibilities identified discussed and agreed. 3. Project Steering Group composition, roles and responsibilities identified, discussed and agreed. 	<ol style="list-style-type: none"> 1. Partners respond and indicate desire to participate as lead and supporting partner. 2. Project Team members agree to participate, agree roles and responsibilities and group works effectively to achieve project outcomes. 3. Project Steering Group Members agree to participate, agree roles and responsibilities. Group has strong sector and employer representation and works effectively to oversee project outcomes. 	Sept-Oct
2. Project Plan Developed and Approved	<ol style="list-style-type: none"> 1. Project Plan is developed, discussed and agreed by Project Team. 	<ol style="list-style-type: none"> 1. Project Team approve Project Plan and implementation work commences. 	Sept - Oct
3. Validation Planning and Approvals Issues Identified and Actioned	<ol style="list-style-type: none"> 1. Providers identify validation issues and process timeline. 2. Providers take necessary actions and initiate the necessary planning approvals with validating HEI. 	<ol style="list-style-type: none"> 1. The foundation degree validation requirements of the validating HEI are met within timescales. 	Oct - Dec
4. Strategic Employer Engagement Process	<ol style="list-style-type: none"> 1. Regional higher level skills priorities and issues confirmed with SummitSkills using the Foundation Degree Framework and the regional Sector Skills Agreement as the starting point. 2. Initial consultations with other relevant sector 	<ol style="list-style-type: none"> 1. Providers develop an overall understanding of employers higher level knowledge and skills issues. 	Oct - Nov

	<p>organisations.</p> <p>3. Initial consultations with relevant trade organisations.</p> <p>4. Initial consultations with key employers/employer representative bodies to confirm understanding of higher level skills/knowledge requirements.</p>		
5. Information Consolidation Phase	<p>1. Higher level knowledge and skills issues of the sector identified by the key stakeholders are summarised and documented in relevant formats ready for use in the detailed employer engagement process.</p> <p>2. A range of simple documents are produced which clearly illustrate the providers understanding of the employers' issues. For example: a statement of priorities, a summary of the proposed FD Framework, an introductory information flyer, introductory first contact email/letter, points to cover checklists for initial discussions, detailed questionnaire, core question checklist for semi structured detailed discussions where time with employer is limited.</p>	1. Providers are fully prepared to begin the detailed employer engagement process to clarify the needs of the employers in their particular region/consortia/fora.	Nov
6. Detailed Employer Engagement Process	<p>1. Providers identify and prioritise their range of employer contacts from their existing sources and strategic partnering sources.</p> <p>2. Providers undertake a detailed survey of employers' requirements, including work based learning, flexible delivery and flexible modes of attendance.</p> <p>3. Providers use a range of engagement methods as appropriate, and concentrate on strong employer contacts that have skills issues, that are interested and committed and likely to generate learners.</p>	<p>1. Survey is successfully completed with a minimum of 20 employers per provider.</p> <p>2. Providers persevere and gather quality data on a range of relevant employers.</p>	Nov - Dec

7. Analysis of Employers' Requirements	1. Detailed survey results are analysed and enable the providers to identify the higher level skills and knowledge needs of the employers and a range of programme design and delivery considerations.	1. Analysis successfully captures the necessary information to inform the development of a "Programme Brief".	Dec - Jan
8. Development of an Employer Led Programme Brief	1. Using the detailed data collected, and with a core group of employers, providers will develop an "employer led" Programme brief which translates the employers' needs into a structured format and will identify their preferred modules and content, the target learner, delivery, design and progression preferences.	1. The Programme Brief successfully captures the employers' requirements. 2. The Programme Brief provides the curriculum design team with a comprehensive overview of what is required and acts as a "precursor" to the Programme Specification. 3. The Programme Brief can be used by other providers who plan to develop and deliver at a later date.	Jan - Feb
9. Detailed Curriculum Development	1. Providers/curriculum development staff work with the core group of key employers to develop the detailed content of the planned foundation degree. 2. Providers/curriculum development staff involve employers in the process at the level at which the employers are happy with.	1. Employers are happy with the final content of the modules and the proposed structure. 2. The programme addresses employers' higher level knowledge and skills needs.	Feb - April
10. Preparation for Internal Validation	1. Providers make the necessary preparations for the internal validation (where relevant) and notify employers of the external validation date.	1. Internal validation runs smoothly and successfully.	April - May
11. Identifying and recruiting the Cohort	1. Providers work with employers to identify a potential cohort. 2. Where employers may not be able to commit to a full cohort, providers will make plans for any necessary external recruitment.	1. Where possible employers will provide a viable cohort. 2. If necessary, providers market the programme with a wider group of employers to recruit a full cohort.	April - Aug

12. Marketing, Promotion and PR	1. Where external recruitment will be necessary, providers work with their respective marketing staff and initiate timely marketing and PR activities to ensure recruitment to the programme.	1. If necessary, marketing and PR activities will ensure that sufficient students are recruited to the programme.	April - Aug 2009
13. External Validation	1. Providers make the necessary plans to ensure that the programme specification and related documentation is completed for the validation event. 2. Representative employers and SummitSkills representatives are invited and encouraged to attend the external validation event.	1. The validation event runs smoothly and there are limited issues raised or points of clarification noted. 2. The validation panel is impressed with the employer representation and contribution at the event and throughout the whole programme development process and the programme is successfully validated.	July 2009
14. Project Dissemination	1. Providers disseminate project successes and outcomes through a variety of media to employers, learners, providers and partners through various regional and local publications, websites & events.	1. The key project successes and outcomes are successfully disseminated across the partnership and to other practitioners within the sector and wider.	July 2009 onwards

APPENDIX 2 – EMPLOYER ENGAGEMENT ASPECTS FOR DEVELOPING A CONSTRUCTION FOUNDATION DEGREE

Outline development plan

This plan summarises the employer engagement activities used in the development of two Foundation degree awards, one in Building Services Engineering and the other in Construction Project Management.

The same process was used throughout the whole of Yorkshire and Humber region. Eight Higher Education Institutions contributed to the project.

The plan provides a base line model for practitioners developing and employer and sector led Fd in COM. The process can easily be completed within an academic year.

Strategic Employer Engagement Process

Using the appropriate Sector Skills Council's Foundation Degree Framework Specification and the regional Sector Skills Agreement, establish or confirm the regional higher level skills priorities and issues. Consult with other relevant sector organisations and with relevant trade organisations. Start consultations with key employers/employer representative bodies to confirm understanding of higher level skills/knowledge requirements.

The providers will thereby develop an overall understanding of employers' higher level knowledge and skills issues.

Information Consolidation Phase

Summarise the information gained above and document it in relevant formats ready for use in the detailed employer engagement process. The range of simple documents that are produced should clearly illustrate the providers understanding of the employers' issues. The documents may include: a statement of priorities, a summary of the proposed Foundation degree Framework, an introductory information flyer, introductory first contact email or letter, points to cover, checklists for initial discussions, detailed questionnaire, core question checklist for semi-structured detailed discussions where time with employer is limited.

Providers are then fully prepared to begin the detailed employer engagement process to clarify the needs of the employers in their

particular region or consortium.

Detailed Employer Engagement Process

Providers now should identify and prioritise their range of employer contacts and undertake a detailed survey of their requirements, including work based learning, flexible delivery and flexible modes of attendance.

Providers can use a range of engagement methods as appropriate, but would concentrate on the strong employer contacts i.e. those that have skills issues, that are interested and committed and likely to generate learners.

On completion of the survey, range of relevant employers (ideally a minimum of 20 employers per provider) will have generated quality data about their educational requirements

Analysis of Employers' Requirements

Analysis of the detailed survey results will enable the providers to identify the higher level skills and knowledge needs of the employers. These will suggest a range of programme design and delivery alternatives.

Analysis successfully captures the necessary information to inform the development of a "Programme Brief".

Development of an Employer Led Programme Brief

A core group of employers and providers can now develop an employer led "Programme Brief" which translates the employers' needs into a structured format. Preferred modules and content, the target learner, delivery, design and progression preferences can all be identified. The Programme Brief provides the

curriculum design team with a comprehensive overview of what is required and acts as a precursor to the Programme Specification.

The Programme Brief successfully captures the employers' requirements. It can be used by other providers who plan to develop and deliver the award at a later date.

Detailed Curriculum Development

Curriculum development staff will now work with the core group of key employers to develop the detailed content of the planned foundation degree until employers are happy with the proposed structure and the content of the modules

The programme meets employers' higher level knowledge and skills needs.

Validation

The programme specification and related documentation should be submitted for validation and internal approval through the awarding body process. Representatives from employers and Sector Skills Council are invited and encouraged to attend the validation event.

The programme is successfully validated.

Identifying and recruiting the first cohort

Providers work with employers to identify a potential cohort. Where employers may not be able to commit to a full cohort, providers will make plans for any necessary external recruitment.

If necessary, providers market the programme with a wider group of employers to recruit a full cohort.

Marketing, Promotion and PR

Where external recruitment will be necessary, providers work with their respective marketing staff and initiate timely marketing and PR activities to ensure appropriate recruitment to the programme.

Dissemination

Providers disseminate programme successes and outcomes through a variety of media to employers, learners, providers, professional institutions, unions and ConstructionSkills through various regional and local publications, websites & events. The key programme successes and outcomes are successfully disseminated across the partnership and to other practitioners within the sector.

...and afterwards...

...when the course is up and running, the dialog with employers must continue.

Having developed the award it is necessary to continually monitor student and employer needs. Work based learning aspects of the award will help to maintain the close links between employer and education provider as will employer liaison panels.

It is worth noting that this course development process has done more than develop a Foundation degree. It will have brought employers and education providers much closer together.

APPENDIX 3 – DETAILS OF CONSTRUCTIONSKILLS NOS ANALYSIS TO INFORM THE FD COM CURRICULUM AND PROGRAMME STRUCTURE

A detailed analysis of the relevant NOS and associated NVQ Diplomas has been undertaken by ConstructionSkills to inform the programme structure and curriculum content outlined in Section 11. This Appendix gives brief details of the methodology adopted.

NOS provide a sector basis and benchmark for all the higher level vocational qualifications across the sector, including National Vocational Qualifications (NVQ Diplomas) and Scottish Vocational Qualifications (SVQs). The Qualifications and Credit Framework (QCF) for England, Wales and Northern Ireland [22] requires such competence-based qualifications, preparing people for employment, to be based on the sector's NOS.

Most of the sector's professional bodies have also mapped their membership requirements to these NOS and NVQ Diplomas/SVQs. The higher level generic NOS for Professional, Managerial and Technical Roles in the Built Environment cover all the higher level functions across the sector [23]. The sector encourages Higher Education Institutions and providers to engage with, and refer to NOS to inform the development of their Fd course in COM.

Briefly, the analysis undertaken by ConstructionSkills has covered the range and use of subject areas in the NOS for the COM area, relevant Labour Market Information and functions in the following NVQ Diplomas :

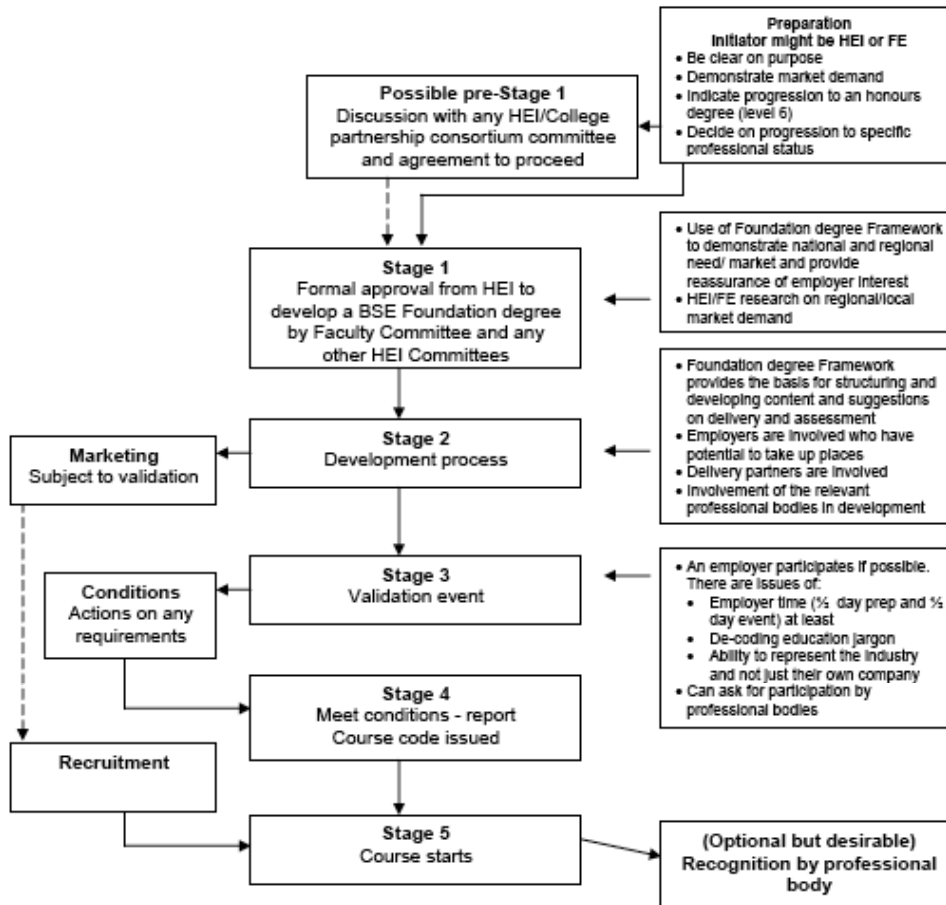
- Construction Site Supervision (Level 3)
- Construction Site Management (Level 6)
- Construction Contracting Operations (Level 3)
- Construction Contracting Operations Management (Level 6)

This analysis has identified the relative commonality of need of knowledge areas in relation to size of occupational groups/sub groups. This has then been taken to identify and group subject coverage needs for an Fd in COM.

Analysis of the knowledge areas found in the generic ConstructionSkills NOS can be related to the range of built environment NVQ Diploma/SVQs (which are developed from NOS). A profile indicating the potential prevalence of each area of learning/knowledge can then be identified by analysing the NOS with labour market intelligence and skills survey data. This analysis shows the degree to which particular categories of knowledge are likely to be a common need for the greatest coverage of personnel across the industry. The NOS information also signposts key/core/employability skills.

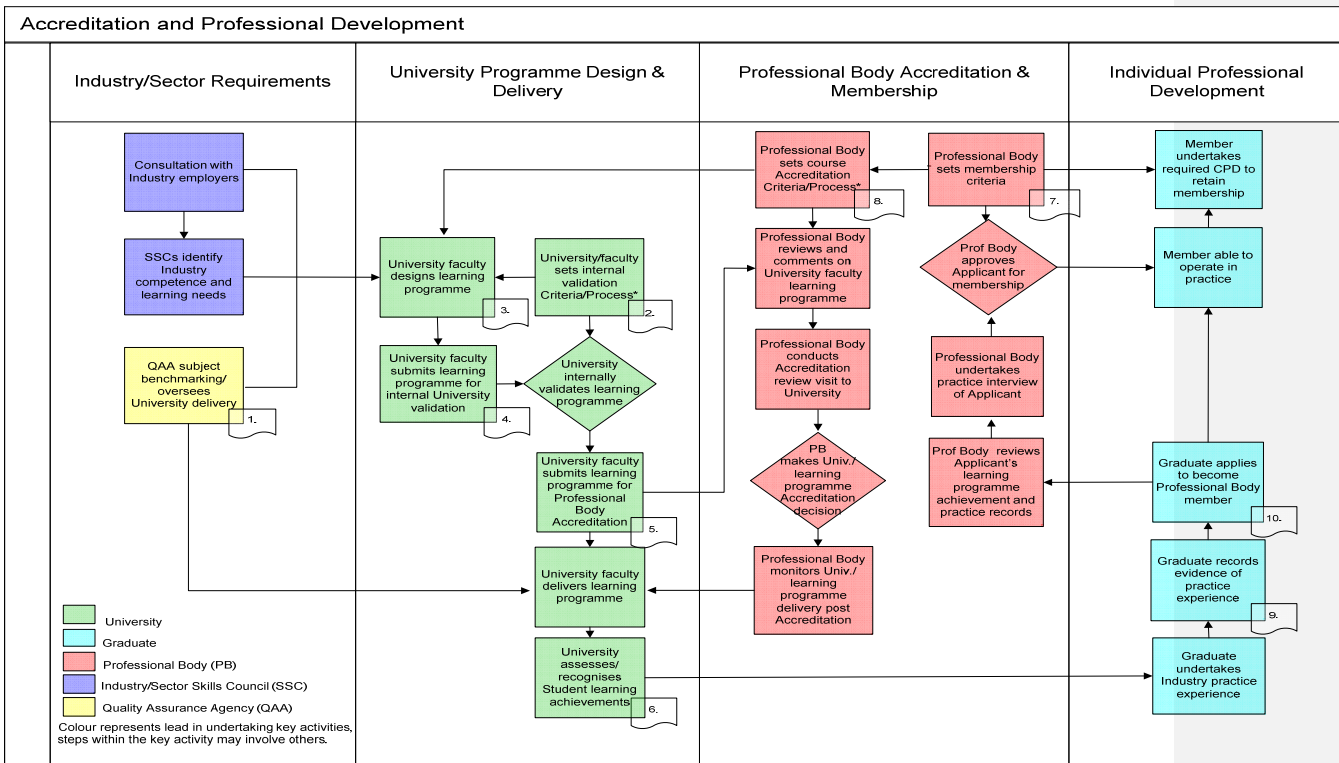
This approach has been used to develop the curriculum guidance in this Framework specification in Section 11. General guidance on the use of NOS in the development of course curricula can be found at [24]

APPENDIX 4 – A TYPICAL HEI VALIDATION PROCESS



APPENDIX 5 – GENERAL PROFESSIONAL BODY ACCREDITATION MODEL

ConstructionSkills Construction Qualifications Strategy Strand 5



APPENDIX 6 – CORE PRINCIPLES FOR APPROVAL CERTIFICATION AND ACCREDITATION CRITERIA AND PROCESSES

ConstructionSkills

Construction Qualifications Strategy Strand 5

Establish Common/Core Principles for Approval, Certification and Accreditation Criteria and Processes

Common Academic Accreditation Process

Entities

- Applying HE/Education body
- Accreditation Coordinator
- Assessment Visit Panel
- Review Board/Decision body

Accreditation Process Steps

1. Application for Accreditation

1.1. HE/Education establishment submits accreditation (or re-accreditation) documentation – at specified time before assessment is required – and pays appropriate fee

~~1.1.1.2.~~ Submission documentation checked by Accreditation Coordinator

~~1.2.1.3.~~ Request more information?

1.4. Accreditation request forwarded to Accreditation Assessment Panel and copy to Accreditation Review Board/Committee

~~1.3.1.5.~~ Note: Composition of Assessment Panel and Review Board

2. Course Review

2.1. Site visit required?

2.2. Accreditation site visit (composition and min no. of inspectors?)

2.3. Note: What is reviewed?

2.4. Meetings with whom?

2.5. Request more information?

2.6. Discussions with others? (QCA, other PIs, industry representatives, other HEs etc)

~~2.6.2.7.~~ Documentary evidence of concerns being addressed?

~~2.7.2.8.~~ Further visit?

~~2.8.2.9.~~ Draft visit report

2.10. Forward to applying body for factual review

~~2.9.2.11.~~ Submit visit report to Review Board

2.12. Visit Report (and supporting documentation) reviewed by Review Board/Committee

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2.13. Further visit/information required?

3. Accreditation Decision

3.1. Notification of decision to applying body – with accompanying conditions of accreditation

~~3.1.3.2.~~ Opportunity to re-submit if unsuccessful

~~3.2.3.3.~~ Publication of successful accreditation – internally and public

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4. Post Accreditation

4.1. Monitor compliance with conditions of accreditation

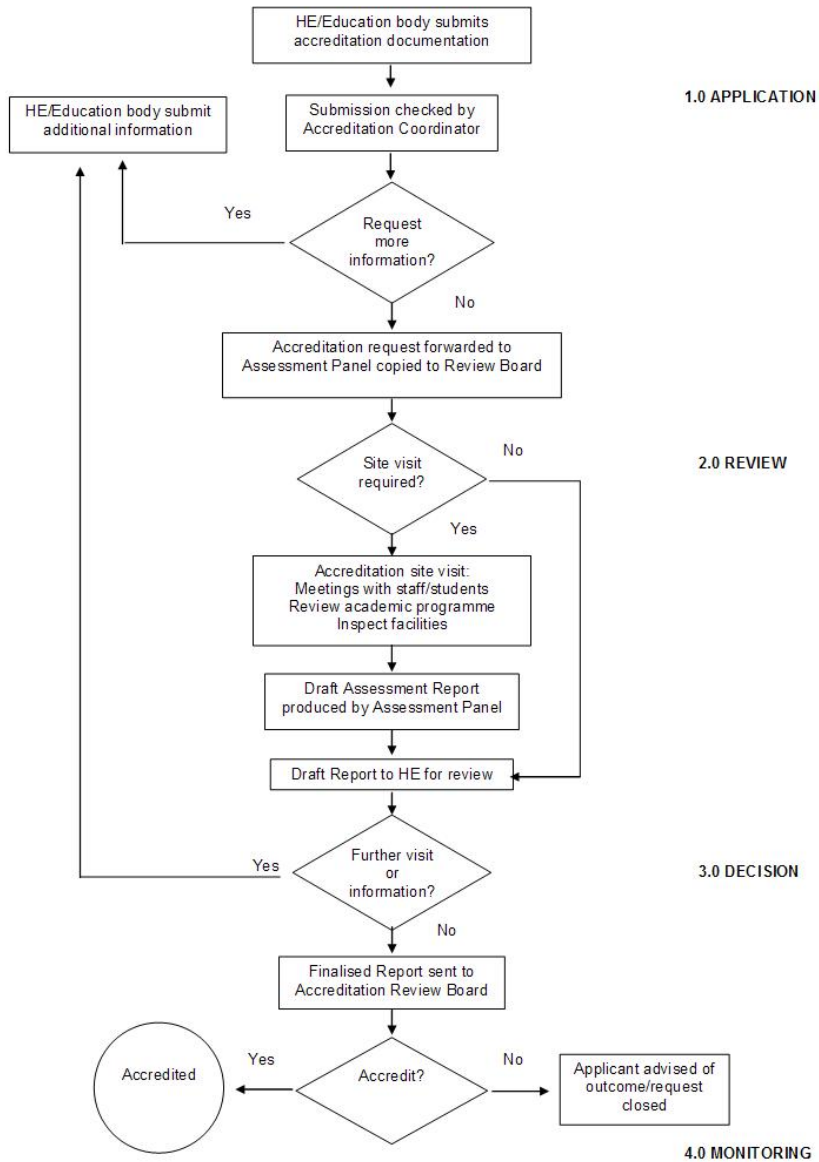
4.2. Interim follow up visit

4.3. Additional documentation

4.4. Re-accreditation visit

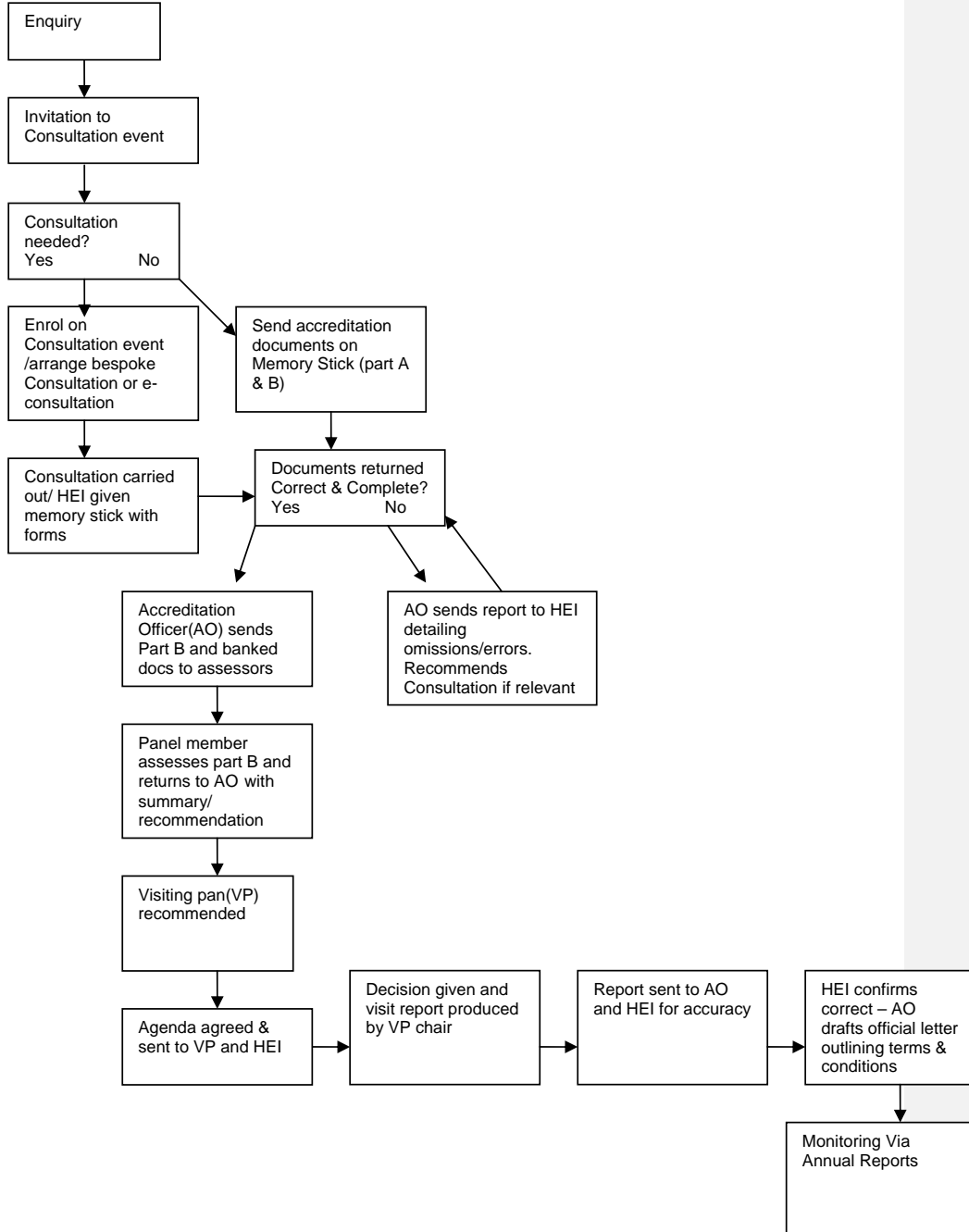
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APPENDIX 7 – COMMON ACCREDITATION PROCESS



Construction Qualifications Strategy Strand 5: Common Accreditation Process

APPENDIX 8 – CIOB ACCREDITATION MODEL



APPENDIX 9 – SUMMARY OF DOCUMENTATION REQUIRED FOR CIOB ACCREDITATION

Part A	Banked Documents	Part B	Banked Documents
Governance 1) Strategic Plans/ Mission Statement 2) Research Policy/ Knowledge transfer 3) Links to Industry	Policy statement	Reporting •1) Entry Qualifications •2) Attrition Rates •3) Graduation Profile (number of 1 st /2 nd /3 rd class degrees)	Statistical data
Quality Assurance 1) Policy 2) Self assessment procedures 3) Peer appraisal systems 4) Systems for student/ employer feedback 	Validation docs/ QAA reports	Standards & Requirements •1) Specifications (core subjects) •2) Mapping to CIOB Education Framework (EF) •3) QAA Reports •4) External examiners reports •5) Vocational relevance/ external agencies involved in programme •6) Schemes/ mechanisms to prepare students for employment	Specifications/ module descriptors Mapping to CIOB EF QAA Reports EA Reports Progression rates data
Resources 1) Location of HEI 2) Policy for Resource allocation (human, funding) 3) Systems for monitoring programme validity 4) Volume of academic staff & range of qualifications/ experience 5) Staff Development CPD and individual development 6) Learning Environment – resources that support learning 7) Assessment Strategy 8) Research Policy & Strategy 9) Pastoral Care – policy statement 10) Equal Opportunities Policy/ Diversity Policy 11) Environmental Policy	Policy statement Data re: qualifications & experience of Teaching staff Policy Statements		
Relations with HEIs •1) Ethos & links to PIs & education committees •2) Promotion of student links to PIs •3) Staff membership of CIOB •4) Understanding of and provision of professional development needs	To be actively developed over 5 year period		
Evaluation of Centres & Programmes	Annual Review		

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	5 year review Policy reviews Programme review Self assessment		
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APPENDIX 10 – GUIDANCE ON PORTFOLIO BUILDING FOR NATIONAL VOCATIONAL QUALIFICATION (NVQ) DIPLOMA ASSESSMENT

Objectives

To give the individual practical advice about:

- compiling and maintaining a NOS-based portfolio of evidence of competence;
- tailoring your portfolio to gain an NVQ Diploma;
- identifying areas where your knowledge, skills and understanding needs developing so you can meet the standard of competence.

For the individual's line manager and employer, or mentor:

- to enable you to advise and support your staff in assembling their portfolios and submitting them for assessment.

What is it?

A portfolio of evidence is a collection of relevant and authenticated documents (and other material and products like: samples, models, photos, recordings). In general the contents arise from normal day-to-day work and have not been specially created. (There are a few specified instances however when NVQ Diplomas/SVQs allow material generated from, for example, a case study, to be used as valid evidence). The items of evidence are cross-referenced to the criteria for assessment (performance criteria and range statements) and their significance highlighted. Examples include the documents submitted for assessment of an NVQ Diploma/SVQ unit, or those for a Professional Institution Membership Review.

What are the benefits?

Qualifications, especially Vocational and Professional ones, are becoming more important when: changing jobs, proving competence to a potential client, complying with statutory requirements for safety-critical functions, reducing the cost of professional indemnity insurance, complying with in-house and client/customer quality assurance (QA) systems, etc.

A portfolio of evidence is useful for: NVQ Diplomas/SVQs, other competence-based qualifications, CPD, performance appraisals, promotion/selection, records of achievement, CVs, redeployment and transfer to a new job.

Steps

1. What are you doing now?

If you do not have a personal development plan decide which of your job functions and work experience are significant. Identify evidence to show your competence (see also step 4).

2. Choose appropriate units

Identify sources of advice inside and outside your organisation. Choose the appropriate Occupational Standards for your work-role and prioritise them. Check whether all the Elements apply.

3. Identify the evidence required

Each Occupational Standard has two evidence specifications. The first, the Performance Evidence, identifies direct performance evidence that it is possible and feasible to collect from normal workplace activity. This has been identified directly from the Performance Criteria, which may be:

- **Product Evidence:** tangible results - what the candidate has produced (e.g. reports, drawings, minutes of meetings etc.);
- **Process evidence:** observed activity - the way in which the candidate acted (e.g. a presentation to a client).

The second specification is the Knowledge and Understanding (K&U) Evidence. This sets out topic/subject areas found in each Standard. These areas have been defined by focusing on, and referencing to, the Ranges within the Standard (where most technical detail is found). The areas either focus on a single Range, or on two or more Ranges combined where they relate together. Normally the evidence specification will indicate: "Established from questioning the candidate or from matched industry recognised education and training course assessment. A candidate's knowledge and understanding can also be revealed through presented performance evidence."

Identify where an item of evidence can also be used to satisfy the requirements of more than one of the Occupational Standards.

4. Prepare Assessment plan

Start with just one Unit. What types of evidence can you provide from your normal work activities? What opportunities could furnish more evidence? Start to collect old evidence early. Make a working plan to identify how much evidence will be sufficient and where items of evidence can be used efficiently to meet more than one requirement.

5. Collect the evidence

Discuss plans with your Line Manager, Work-based Recorder, Mentor or Assessor. Collect past and current evidence. Ensure efficiency and sufficiency.

6. Fill the gaps

Compare the evidence against the Occupational Standard. Do you need more evidence (steps 3 and 4), or more competence (more/different work experience and/or more learning/development)?

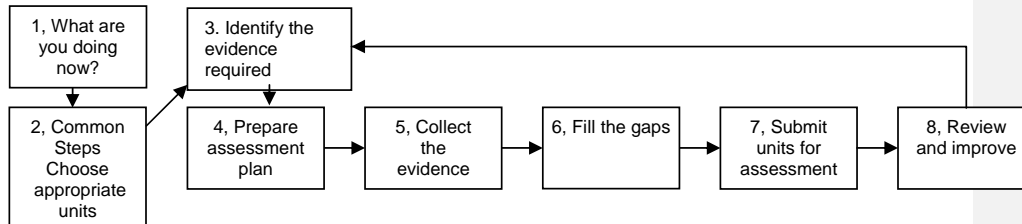
7. Submit Units for Assessment

Submit a Unit as soon as possible. Present the evidence appropriately. Make the assessor's task easier by cross-referencing evidence to the Occupational Standards. Identify where an item of evidence can also be used to satisfy the requirements of other Occupational Standards.

8. Review and improve

Learn from first attempts on how to improve. Has it all been worthwhile? What Units do you want to do next?

How the Steps Fit Together



APPENDIX 11 – MAPPING FROM AN INTERNAL HEI Fd APPROVAL PROCESS TO PRESENT EVIDENCE FOR NVQ DIPLOMA ASSESSMENT

fdf Endorsement Evidence Document 5

NVQ/SVQ Construction site management qualification structure and the relationship with the FdSc Construction Management modules

NVQ/ SVQ Level 4 Construction Site Management		Site Manager Route:		FdSc Construction Management modules															
Unit No.	Descriptor	Building & Civil Engineering	Conservation	SCET 4010	SCET 4020	SCET 4030	SCET 4040	SCET 4050	SCET 4060	SCET 5020	SCET 5030	SCET 5040	SCET 5050	SCET 5060	SCET 5070	SCET 5080	SCET 5090		
VR 210	Develop and Maintain Good Working Relationships	M	M				*				*	*							
VR 713	Allocate Work and Check People's Performance	M	M	√			*				*	*	√	√					
VR 726	Establish, Implement and Maintain Systems for Managing Health, Safety and Welfare	M	M	√			*	√			*	*		√		√	√		
VR 728	Evaluate and Select Work Methods	M	M	√	√	√	*		√	√	*	*			√	√	√		
VR 730	Monitor Project Activities	M	M	√		√	*	√	√		*	*	√						
VR 735	Control Project Progress against Agreed Quality Standards	M	M	√	√		*		√	√	*	*			√	√	√		
VR 737	Control Project Progress against Agreed Programmes	M	M	√			*	√			*	*	√		√	√	√		
VR 740	Manage Your Personal Development	M	M			√	*				*	*		√					
VR 714	Enable Learning Opportunities	M	M			√	*				*	*		√					
VR 715	Contribute to the Identification of a Work Team	M	O	√			*				*	*		√					
VR 720	Plan Historical Conservation/Restoration Activities		M		√		*	√	√	√	*	*			√	√			
VR 727	Establish, Control and Monitor Environmental Factors and Sustainability	M	O	√		√	*	√			*	*	√		√	√	√		
VR 729	Plan the Preparation of the Site for the Project	M	O	√			*		√		*	*			√	√	√		
VR 731	Ensure that Work Activities and Resources Meet Project Work Requirements	M	M	√		√	*				*	*	√			√	√		
VR 732	Identify, Allocate and Plan the Deployment and Use of Plant, Equipment or Machinery	M	M	√		√	*				*	*			√		√		
VR 733	Organise, Control and Monitor Supplies of Materials	M	M	√	√	√	*		√	√	*	*				√	√		
VR 734	Establish and Monitor Communication Systems and Organisational Procedures	M	M	√		√	*				*	*		√			√		
VR 736	Establish Dimensional Control Criteria	M	M			√	*		√		*	*							
VR 738	Control Project Quantities and Costs	M	M	√			*		√		*	*		√		√	√		
VR 739	Evaluate Feedback Information and Recommend Improvements	M	O	√		√	*	√			*	*		√	√		√		
VR 741	Plan and Schedule the Maintenance or Remedial Activities of Property, Systems or Services		M			√	*	√			*	*			√		√		

Key
M NVQ/SVQ Unit is mandatory
O NVQ/SVQ Unit is optional
√ Module delivers underpinning knowledge that supports attainment of the NVQ unit.
* Project/teamwork/work-based nature of the module provides the opportunity to demonstrate competence that supports attainment of the NVQ unit

APPENDIX 13 – EMPLOYER AND LEARNER PROMOTIONAL MATERIAL - HULL COLLEGE

Foundation degree in Construction Project Management

Employers Engage and Reap the Rewards!

a project information leaflet



building careers in construction

Employers Lead the Way

Employers have led the way in a project to develop a Foundation degree in Construction Project Management at Hull College aimed at addressing some of their higher level skills issues. The Foundation degree has been created through collaboration with key industry professionals and employers across the Yorkshire and Humber region. This has proved to be highly successful and has clearly identified some of the key skills issues in the sector – construction project management coming out as a priority area!

Many employers in the region offered their services to support the development of this course and most are conscious that everyone in the construction supply chain benefits from a more highly qualified workforce. The Yorkshire and Humber construction industry is increasingly undertaking larger, more complex public and private sector projects. There are major opportunities for construction companies to expand and benefit from the inward investment that the region is currently enjoying. Only those companies with the right level of staff can take advantage of these opportunities.

A Development Success Story

The Foundation degree was developed through a sub-regional collaborative project between Foundation Degree Forward (fdf), Aimhigher Humber, Hull College, The Yorkshire and Humber East Lifelong Learning Network (YHELLN) and Grimsby Institute of Further and Higher Education. ConstructionSkills and SummitSkills, the two key national sector skills councils played a key role in the project and in the course development process by determining their regional skills priorities. The project's aim was to help construction employers to address their higher level skills needs and to improve the limited provision of foundation degrees in the construction sector.

Skills Priorities for the Region

Project staff worked closely with ConstructionSkills, the sector skills council for the Construction and the Built Environment who had identified Construction Management was one of the key areas where there are skills shortages.

Intelligence gathered by the Construction Skills Network Observatory for Yorkshire and Humber shows that there will be an annual requirement of 520 new construction managers for each year between 2008 and 2012, and that these shortages are not being addressed through training.

ConstructionSkills were able to identify a number of key priorities for foundation degree development in the region to address these shortages. These included: project management, client handling, procurement processes and the impact of sustainable development. They also identified that leadership, people skills and communication skills held by managers also need to be improved.

Another key priority was for education providers to consider the most popular method of delivery for employers and learners, and that any courses developed should align with the industry commitment to the CSCS card scheme where possible. Finally, ConstructionSkills were clear that they wanted providers to consider that foundation degrees should form part of progression routes, that they should be professional body validated where possible and that they should seek industry recognition. These issues were built into the consultation process with employers and the subsequent curriculum and programme development process.



“We are planning major construction projects over the next 10 years solving the difficulty in recruiting the staff needed to oversee and run these projects. With the support of employer input, I expect that the course will quickly become accepted.”

Duncan Taylor, Head of Capital Development, Hull and East Yorkshire Hospitals NHS Trust.

The Impact of Skills Shortages and Skills Gaps

Initial project research identified that the proportion of employers in Yorkshire and the Humber reporting skills shortage vacancies, hard to fill vacancies and skills gaps is significantly higher than the national average. A fifth of regional construction employers reported skills gaps.

50 per cent of employers stated that their skills gaps increased their operating costs and 67 per cent stated that skills gaps increased the workload of other staff. Nationally, whilst 56 per cent of professional and associate professional staff and 35 per cent of managers and senior staff in the construction sector are qualified to NVQ Level 4 or equivalent, only 13 per cent of the overall workforce is qualified to NVQ Level 4 or equivalent. This represents a huge amount of staff with the potential to develop themselves, their business and the sector.

Employers get engaged and see the results

Project staff set out to engage with a wide range of construction companies and organisations across the Humber sub region to give them opportunity to influence the development of a new foundation degree for their sector. They wanted employers to determine the content of the programme and the delivery methods – making it relevant to their business, right for their employees and targeted at addressing skills gaps that were affecting performance.

A substantial number of employers were consulted with, including members and Chair of the Humber Training Group (for Construction). A core group of employers emerged who were very interested in contributing their views, issues and ideas. Through further detailed consultation, they identified the essential skills and knowledge elements of the course.

After detailed discussions with construction curriculum staff at the College, it was possible to translate their requirements into a Foundation degree in Construction Project Management.

Some of the employers who were consulted

Below are some of the employers who were involved in detailed discussions, many of whom contributed to the development of the content of the foundation degree.

- Architectural Consultancy – North East Lincs Council
- Britcon (Scunthorpe) Ltd
- Construction Management Services – East Riding of Yorkshire Council
- Federation of Master Builders
- Gelder and Kitchen
- HBG Construction
- Heritage Construction
- Hull and East Yorkshire NHS Trust
- Hull Property, Hull City Council
- North Lincs and Goole NHS Trust
- Promanex Ltd (formerly Jefco Services Ltd)
- Robinson & Sawdon Ltd
- Roche & Son Ltd
- Rotherham Doncaster and Sheffield NHS Foundation Trust
- Scarborough & North East Yorkshire NHS Trust
- Shepherds Construction
- The Manufacturing Site Building Team at Smith & Nephew

An Innovative New Programme

The programme seeks to broaden the existing knowledge and skills base of learners and to help them to develop a clear understanding of the construction process. They will learn about the fundamental components of a construction project and the critical success factors. The ultimate objective is to enable them to take successful responsibility for increasingly larger and more complex projects.

Learners will study a range of modules all fundamentally concerned with the construction project management process. The course will be structured over two levels and generally studied over a three year period.



rs and this foundation degree will contribute towards manage these projects. Due to the high level of ot by the industry.”

Modules include:

- Health and Safety
- Building Law
- Managing and Communicating with Teams
- The Construction Process
- IT for Construction and Financial Management
- Construction Technology
- Building Services Engineering
- Sustainable Construction and the Environment
- Contractual Procedures
- Supply Chain Management
- Applying Sustainable Construction Technologies
- Construction Project Management and a final Work Based Learning Project/Dissertation

Who is the course for?

The course is aimed at learners who may be employed in a skilled trade, a technical, supervisory or first line management role. The target learners will have already developed a considerable amount of experience and knowledge in one of the following: site supervision, site management, project based roles, estates, construction or capital development, or within a small to medium sized construction company.

The course is aimed at staff who manage construction projects and who need access to up-to-date and relevant subject knowledge to help them perform more effectively in their role at work. It will also be useful for employers who have staff with the potential to progress, and by employers who struggle to recruit (and retain) appropriately qualified and experienced construction project managers. The Foundation degree could be used as an internal development programme, helping employers to motivate and retain staff, or to train new staff in all aspects of construction project management.

Facilitating Progression to Higher Education for Construction Learners

Regional data suggests that there is a low level of foundation degree provision in the region and that there are limited opportunities for certain groups in the construction sector to progress onto a work based learning higher education programme. In particular, there is limited opportunity for learners who have completed craft programmes at Level 3 and want to progress, or, for those with other Level 3 vocational qualifications who want to return to gain higher level skills and qualifications after a number of years of work experience.

National data indicates that the sector itself believes that more appropriate routes need to be developed to help the transitional process from craft and technical to supervisor and manager level in order to capacity plan for the future workforce. In the Humber, 46 per cent of the workforce is between 25-44 years of age and 38 per cent are over 45 years of age. There is limited opportunity for progression from craft to technical or for skilled craftsmen generally.



"Because of the early involvement of employers, the curriculum reflects the core knowledge a project manager is expected to bring to the role. It has been a very successful and enlightening team effort which should result in a worthwhile and valuable qualification."

Ross McFarlane, Health Safety & Training Manager, Promanex (Civils & Industrial Services) Ltd,
Chair of the Humber Training Group (for Construction)

What are Foundation degrees?

Foundation degrees are a flexible alternative to traditional higher education programmes and combine academic study with practical application and are predominantly work-based. Employees focus on projects that are directly relevant to their business and on ways of improving day-to-day performance, productivity and profitability. Foundation degrees are equal to the first two years of a University honours degree, and with further study can be topped up to a full honours degree. The Foundation degree in Construction Project Management has been designed specifically around the needs of construction sector employers and their employees.

There is a strong emphasis on personal development and at least a quarter of the course will concentrate on developing the skills and knowledge that are required by construction professionals. Another quarter of the programme will comprise work-based learning modules with projects and pieces of work that are directly related to the learner's role at work. Learners will be assigned a workplace mentor who will support and guide them through the development process.

Duration and Delivery

The Foundation degree in Construction Project Management is an award of Leeds Metropolitan University and will be delivered at the Hull College Construction Technologies Centre of Vocational Excellence. The course will be offered at Hull College from September 2008* delivered on a part-time basis. The programme will normally be three years duration, and offers articulation to BSc (Hons) Development & Environment at Leeds Met.

It is likely that the programme will be offered as a day release or evening delivery basis but other flexible delivery methods may be used throughout the programme. Early discussions are currently underway to investigate the integration of assessment for the CSCS card scheme as part of the Foundation degree.

Grimsby Institute of Further and Higher Education plan to deliver the programme from September 2009.

Entry Requirements

Applicants would normally hold a relevant Level 3 qualification such as an Advanced Apprenticeship, NVQ3 or equivalent relevant vocational qualification. Applicants with relevant occupational experience are also encouraged to apply.

Want further information on the Project?

For more general information on the project, please contact Jackie McAndrew, Project Consultant on 07930 108 300 or jackie@edenskinfood.karoo.co.uk.

Want further information on the Course?

For more information on the course, please call David Barley, Programme Leader, Hull College Construction Department on 01482 598794 or DBarley@hull-college.ac.uk.

Future Plans for Projects

Discussions are under way for a new project to develop a foundation degree in Building Services Engineering, an area where there is currently no provision in the Humber sub-region. If you would like to get involved or would like further information please contact.

John Deverell, Higher Skills Team Leader at the YHELLN on 07515 188 245 or John.Deverell@eastridingcollege.ac.uk

Jackie McAndrew, Project Consultant on 07930 108 300 or jackie@edenskinfood.karoo.co.uk

Links

www.aimhigherhumber.org
www.fdf.ac.uk
www.hull-college.ac.uk
www.grimsby.ac.uk
www.yhelln.ac.uk

*subject to validation
Printed July 2008



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