

Specification

Edexcel NVQ/competence-based
qualifications

**Edexcel Level 6 NVQ Diploma in Built Environment
Design Management (QCF)**

For first registration August 2010

In partnership with



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This qualification is offered as part of a Joint Awarding Body Partnership with construction industry professional bodies; the Chartered Institute of Building (CIOB), and the Institution of Civil Engineers (ICE), for whom the NVQs are steps to professional recognition.

www.ciob.org.uk

www.ice.org.uk



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Qualification titles covered by this specification

This specification gives you the information you need to offer the Edexcel Level 6 NVQ Diploma in Built Environment Design Management (QCF):

Qualification title	Qualification Accreditation Number (QAN)	Accreditation start date
Edexcel Level 6 NVQ Diploma in Built Environment Design Management (QCF)	500/9453/1	01/08/2010

This qualification has been accredited within the Qualifications and Credit Framework (QCF) and is eligible for public funding as determined by the Department for Education (DfE) under Sections 96 and 97 of the Learning and Skills Act 2000.

The qualification title listed above features in the funding lists published annually by the DfE and the regularly updated website. It will also appear on the Learning Aims Database (LAD), where relevant.

You should use the QCF Qualification Accreditation Number (QAN), when you wish to seek public funding for your learners. Each unit within a qualification will also have a unique QCF reference number, which is listed in this specification.

The QCF qualification title and unit reference numbers will appear on the learners' final certification document. Learners need to be made aware of this when they are recruited by the centre and registered with Edexcel.

Key features of the Edexcel Level 6 NVQ Diploma in Built Environment Design Management (QCF)

This qualification:

- is nationally recognised
- is based on the ConstructionSkills National Occupational Standards (NOS). The NOS, Assessment Requirements/strategy and qualification structure are owned by ConstructionSkills.

What is the purpose of this qualification?

This qualification is appropriate for employees in the construction and the built environment sector working across a broad range of areas. It is designed to assess occupational competence in the workplace where learners are required to demonstrate skills and knowledge to a level required in the construction industry.

Who is this qualification for?

This qualification is for all learners aged 18 and above who are capable of reaching the required standards.

Edexcel's policy is that the qualifications should:

- be free from any barriers that restrict access and progression
- ensure equality of opportunity for all wishing to access the qualifications.

What are the benefits of this qualification to the learner and employer?

This qualification allows learners to demonstrate competence against National Occupational Standards which are based on the needs of the construction industry as defined by ConstructionSkills, the Sector Skills Council. As such it contributes to the development of skilled labour in the sector.

What are the potential job roles for those working towards this qualification?

Construction supervisor/manager.

What progression opportunities are available to learners who achieve this qualification?

This qualification allows learners to demonstrate competence in built environment design management at a level required by the construction and the built environment industry. Learners can progress across the level and size of the Construction and the built environment competence and knowledge qualifications and into other occupational areas such as team leading and management.

Further information is available in *Annexe A*.

What is the qualification structure for the Edexcel Level 6 NVQ Diploma in Built Environment Design Management (QCF)?

Individual units can be found in the *Units* section. The QCF level and credit value are given on the first page of each unit.

Learners must complete all units in Group A (96 credits). Learners also need to complete five optional units (minimum 61 credits) which includes one unit from group B1, one unit from group C1 and one unit from group D1, then units from any of groups B1, C1, D1 and E1 to get the required minimum total of 157 credits.

A – Mandatory units

Credit value required: minimum 96.

L/600/7711 – Develop design team programmes and working methods in the built environment

K/600/7716 – Develop and advise on design recommendations in the built environment

R/600/7841 – Develop detailed designs in the built environment

M/600/7846 – Agree detailed designs in the built environment

R/600/7855 – Develop and maintain professional relationships and practice in built environment design

G – Optional units (Groups)

Learners must complete a minimum of one unit from Group B1, C1 and D1.

Learners must choose optional units from Groups B1, C1, D1 and E1 to obtain 61 credits.

Credit value required: minimum 61.

B1 – Optional units (Pre-design)

Learners must complete a minimum of one unit from Group B1.

M/600/7863 – Investigate and assess development options in built environment design

J/600/7870 – Confirm project requirements and needs in built environment design

M/600/7877 – Manage the brief, development programme and project risks and opportunities in built environment design

A/600/7879 – Form and induct a project team in built environment design

J/600/7884 – Conduct condition surveys in built environment design

C1 – Optional units (Design Development)

Learners must complete a minimum of one unit from Group C1.

K/600/7893 – Investigate development factors and solutions in built environment design

T/600/7900 – Specify, manage and analyse testing in built environment design

Y/600/7906 – Establish regulatory requirements and secure consents in built environment design

K/600/7912 – Manage project information in built environment design

M/600/7913 – Prepare specifications in built environment design

D1 – Optional units (Post-design)

Learners must complete a minimum of one unit from Group D1.

H/600/7925 – Obtain and select tenders in built environment design

A/600/7932 – Prepare and submit tenders in the built environment

J/600/7934 – Prepare and agree forms of contract in the built environment

Y/600/7937 – Control projects in the built environment

H/600/7522 – Manage project completion and handover in the built environment

E1 – Optional units (Personal Skills)

Y/600/7940 – Develop self and other people and contribute to improving design services in the built environment

How is the qualification graded and assessed?

The overall grade for the qualification is a 'pass'. The learner must achieve all the required units within the specified qualification structure.

To pass a unit the learner must:

- achieve **all** the specified Learning outcomes
- satisfy **all** the assessment criteria by providing sufficient and valid evidence for each criterion
- show that the evidence is their own.

The qualification is designed to be assessed:

- in the workplace or
- in conditions resembling the workplace, as specified in the Assessment Requirements/strategy for the sector, or
- as part of a training programme.

Assessment requirements/strategy

The Assessment requirements/strategy for this qualification has been included in *Annexe E*. It has been developed by ConstructionSkills in partnership with employers, training providers, awarding organisations and the regulatory authorities. The assessment strategy includes details on:

- criteria for defining realistic working environments
- roles and occupational competence of assessors, expert witnesses, internal verifiers and standards verifiers
- quality control of assessment
- evidence requirements.

Evidence of competence may come from:

- **current practice** where evidence is generated from a current job role
- a **programme of development** where evidence comes from assessment opportunities built into a learning/training programme whether at or away from the workplace
- the **Recognition of Prior Learning (RPL)** where a learner can demonstrate that they can meet the assessment criteria within a unit through knowledge, understanding or skills they already possess without undertaking a course of learning. They must submit sufficient, reliable and valid evidence for internal and standards verification purposes. RPL is acceptable for accrediting a unit, several units or a whole qualification
- a **combination** of these.

It is important that the evidence is:

Valid	relevant to the standards for which competence is claimed
Authentic	produced by the learner
Current	sufficiently recent to create confidence that the same skill, understanding or knowledge persist at the time of the claim
Reliable	indicates that the learner can consistently perform at this level
Sufficient	fully meets the requirements of the standards.

Types of evidence

To successfully achieve a unit the learner must gather evidence which shows that they have met the required standard in the assessment criteria. Evidence can take a variety of different forms including the following examples:

- direct observation of the learner's performance by their assessor
- outcomes from oral or written questioning
- products of the learner's work
- personal statements and/or reflective accounts
- outcomes from simulation, where permitted by the assessment strategy
- professional discussion
- assignment, project/case studies
- authentic statements/witness testimony
- expert witness testimony
- reflective accounts
- evidence of Recognition of Prior Learning.

Learners can use one piece of evidence to prove their knowledge, skills and understanding across different assessment criteria and/or across different units. It is, therefore, not necessary for learners to have each assessment criterion assessed separately. Learners should be encouraged to reference the assessment criteria to which the evidence relates.

Evidence must be made available to the assessor, internal verifier and Edexcel standards verifier. A range of recording documents is available on the Edexcel website www.edexcel.com. Alternatively, centres may develop their own.

Additional requirements

The Joint Awarding Body and the SSC Working Practices Group have identified additional requirements that are needed to assess and quality assure qualifications placed on the QCF that use NVQ within their title. These requirements are shown in *Annexe D: Additional requirements for qualifications that use the title NVQ within the QCF*.

Centre recognition and approval

Centre recognition

Centres that have not previously offered Edexcel qualifications need to apply for and be granted centre recognition as part of the process for approval to offer individual qualifications. New centres must complete both a centre recognition approval application and a qualification approval application.

Existing centres will be given 'automatic approval' for a new qualification if they are already approved for a qualification that is being replaced by the new qualification and the conditions for automatic approval are met. Centres already holding Edexcel approval are able to gain qualification approval for a different level or different sector via Edexcel online.

Approvals agreement

All centres are required to enter into an approvals agreement which is a formal commitment by the head or principal of a centre to meet all the requirements of the specification and any linked codes or regulations. Edexcel will act to protect the integrity of the awarding of qualifications, if centres do not comply with the agreement. This could result in the suspension of certification or withdrawal of approval.

Quality assurance

Detailed information on Edexcel's quality assurance processes is given in *Annexe B*.

What resources are required?

Each qualification is designed to support learners working in the construction and the built environment sector. Physical resources need to support the delivery of the qualification and the assessment of the Learning outcomes and must be of industry standard. Centres must meet any specific resource requirements outlined in *Annexe E: Assessment requirements/strategy*. Staff assessing the learner must meet the requirements within the overarching assessment strategy for the sector.

Unit format

Each unit in this specification contains the following sections.

Unit title:					The unit title is accredited on the QCF and this form of words will appear on the learner's Notification of Performance (NOP).
Unit reference number:					This code is a unique reference number for the unit.
QCF level:					All units and qualifications within the QCF have a level assigned to them, which represents the level of achievement. There are nine levels of achievement, from Entry level to level 8. The level of the unit has been informed by the QCF level descriptors and, where appropriate, the NOS and/or other sector/professional.
Credit value:					All units have a credit value. The minimum credit value is one, and credits can only be awarded in whole numbers. Learners will be awarded credits when they achieve the unit.
Guided learning hours:					A notional measure of the substance of a qualification. It includes an estimate of the time that might be allocated to direct teaching or instruction, together with other structured learning time, such as directed assignments, assessments on the job or supported individual study and practice. It excludes learner-initiated private study.
Unit summary:					This provides a summary of the purpose of the unit.
Assessment requirements/evidence requirements:					The assessment/evidence requirements are determined by the SSC. Learners must provide evidence for each of the requirements stated in this section.
Assessment methodology:					This provides a summary of the assessment methodology to be used for the unit.
Learning outcomes:	Assessment criteria:	Evidence type:	Portfolio reference:	Date:	
			The learner should use this box to indicate where the evidence can be obtained eg portfolio page number.	The learner should give the date when the evidence has been provided.	
Learning outcomes state exactly what a learner should know, understand or be able to do as a result of completing a unit.		The assessment criteria of a unit specify the standard a learner is expected to meet to demonstrate that a learning outcome, or a set of learning outcomes, has been achieved.		Learners must reference the type of evidence they have and where it is available for quality assurance purposes. The learner can enter the relevant key and a reference. Alternatively, the learner and/or centre can devise their own referencing system.	

Units

Unit 1: Develop design team programmes and working methods in the built environment

Unit reference number: L/600/7711

QCF level: 6

Credit value: 12

Guided learning hours: 40

Unit summary

This unit is concerned with preparing to undertake a design for a project. You must know about relevant current legislation eg building regulations and DDA.

It is about analysing the project brief and agreeing a design programme. You must be able to demonstrate knowledge of the design brief; you must have knowledge and skills in project programming, and be able to produce a design programme that meets the needs of the stakeholders; and you must have the personal competence to present this programme to the stakeholders, and agree it with them.

It is about your personal skills in engaging the project team in the work to be done, and in managing their performance to best effect. You must be able to demonstrate your communication skills; how you allocate work, and agree design methods and techniques with your team; how you motivate and coach your team members; and how you give them feedback on their performance.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Stakeholders

- the client
- design consultants
- potential contractors
- potential subcontractors and suppliers
- user groups.

2 Design programme

timetable

phasing

interaction between design consultants

critical path

key project stages

interface between design, construction and procurement

deliverables.

3 Constraints

work content

time duration/sequencing

resources available.

4 Presenting

orally

in writing

graphically

electronically.

5 Expectations

specification

design quality

timetable

value for money.

Learning outcomes 3 and 4:

1 Project team:

design and development consultants

potential contractors

potential subcontractors and suppliers

client.

2 Requirements of the development brief and schedule:

key decision stages
scheduling and timetabling
delivery of documentation
statutory approvals
team meetings
procurement
concurrent design and construction.

3 Arrangements to achieve effective communication:

oral
correspondence
reports;
organisation and minuting of team meetings and actioning outcomes
key liaison personnel
electronic data transfer
contingency arrangements.

4 Methods for project implementation, evaluation, modification and updating:

responsibilities
format
content
indexing
distribution
review
resolving conflicts
revising
quality control
storage
security
retrieval
statutory approvals
integration of data.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:**Product evidence:**

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of analysis of the brief (1.1, 1.2) [1.1, 1.2]
- 2 Outline design programmes including necessary modifications (1.3, 1.4) [1.2, 1.3]
- 3 Agreed design programmes (1.5) [1.1, 1.2, 1.4, 1.5]

Process Evidence:

1. Presentations of design programmes (1.5) [1.1, 1.2, 1.3, 1.5]

Learning outcome 3:**Product evidence:**

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Project strategies including clarified development arrangements, to meet the requirements of the development brief and schedules and arrangements to achieve effective communication (3.1, 3.2, 3.3) [3.1, 3.2]
- 2 Records of methods for project implementation, evaluation, modification and updating (3.4) [3.4]
- 3 Records of areas needing investigation, including timescale and costs (3.5) [3.2, 3.4]
- 4 Records of team progress monitor and feedback (3.6, 3.7) [3.4]

Process Evidence:

1 Team meetings and feedback sessions (3.5, 3.6, 3.7) [3.1, 3.3]

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- Construction Skills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to prepare a design programme which meets the requirements of the project brief</p>	<p>1.1 check and confirm with stakeholders that the information in the brief is adequate, accurate and clearly states the project design requirements</p> <p>1.2 analyse the requirements of the brief and check and clarify initial assumptions about the project design programme with stakeholders</p> <p>1.3 develop a realistic outline design programme which takes account of identified constraints</p> <p>1.4 discuss the outline design programme with stakeholders and agree any necessary modifications to the brief, outline design programme, or constraints</p> <p>1.5 prepare, present and agree a design programme which meets the requirements of the brief and the expectations of stakeholders</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to prepare a design programme which meets the requirements of the project brief</p>	<p>2.1 explain how to check and confirm with stakeholders that the information in the brief is adequate, accurate and clearly states the project design requirements</p> <p>2.2 examine how to analyse the requirements of the brief and check and clarify initial assumptions about the project design programme with stakeholders</p> <p>2.3 propose how to develop a realistic outline design programme which takes account of identified constraints</p> <p>2.4 explain how to discuss the outline design programme with stakeholders and agree any necessary modifications to the brief, outline design programme, or constraints</p> <p>2.5 explain how to prepare, present and agree a design programme which meets the requirements of the brief and the expectations of stakeholders</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to establish project team working methods and monitor team performance</p>	<p>3.1 prepare a strategy for the project which makes the best use of the capabilities of all project team members</p> <p>3.2 develop clear arrangements which will enable the project team to meet the requirements of the development brief and schedules</p> <p>3.3 set up arrangements to achieve effective communication within the team</p> <p>3.4 set up and agree with the project team members appropriate and realistic methods for project implementation, evaluation, modification and updating</p> <p>3.5 identify areas needing investigation and agree a realistic timescale and costs with the project team</p> <p>3.6 motivate, coach and involve project team members to maximise and integrate their contributions to the project</p> <p>3.7 monitor the progress of the project team and provide project team members with feedback on progress and agree necessary actions</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to establish project team working methods and monitor team performance</p>	<p>4.1 explain how to prepare a strategy for the project which makes the best use of the capabilities of all project team members</p> <p>4.2 propose how to develop clear arrangements which will enable the project team to meet the requirements of the development brief and schedules</p> <p>4.3 propose how to set up arrangements to achieve effective communication within the team</p> <p>4.4 propose how to set up and agree with the project team members appropriate and realistic methods for project implementation, evaluation, modification and updating</p> <p>4.5 describe how to identify areas needing investigation and agree a realistic timescale and costs with the project team</p> <p>4.6 propose how to motivate, coach and involve project team members to maximise and integrate their contributions to the project</p> <p>4.7 examine how to monitor the progress of the project team and provide project team members with feedback on progress and agree necessary actions.</p>			

Learner name: _____
Learner signature: _____
Assessor signature: _____
Internal verifier signature: _____
(if sampled)

Date: _____
Date: _____
Date: _____
Date: _____

Unit 2: Develop and advise on design recommendations in the built environment

Unit reference number: K/600/7716

QCF level: 6

Credit value: 21

Guided learning hours: 70

Unit summary

This unit covers the first phase of the design process.

It is about taking all the necessary project factors into account, and agreeing the effect that they will have on the design.

It is about selecting and refining design options and choosing the best ones. You must be able to develop design options from the parameters. This process will impact on the design brief; it will involve an iterative approach to finalising both the brief and the design options. You must bring your team with you, and satisfy the decision makers.

It is about presenting your design choices to interested parties, and getting their response and buy-in. You must be able to demonstrate your powers of presentation, influence and persuasion, backed up by sound technical and professional judgement.

It is about reporting back to the stakeholders, and making the necessary modifications to the design. You must be able to justify your decision and demonstrate your technical and professional mettle in negotiating agreements with the stakeholders.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Significant factors:

- client requirements
- design quality
- ergonomic
- community

procurement
physical and site
resource
construction, installation and buildability
legal and regulatory including CDM
health and safety
cost
environmental
sustainability
security
disability access
standardisation
adaptability/flexibility
performance
conservation
value engineering
visual and spatial
programming
required lifecycle
use
new materials and technology
project type, purpose, location
anticipated development timetable
energy use.

Learning outcomes 3 and 4:

1 Design approaches, new sources of information and ideas:

those which are suggested by the brief
previous knowledge and experience of similar work
solutions by others to similar problems
innovative thinking.

2 Tests:

comparative
consultative
mathematical modelling
physical modelling
simulation
physical testing
value engineering.

3 Significant parameters:

sustainability
security
disabled access
standardisation
adaptability/flexibility
design quality
ergonomic
community
procurement
physical and site
resource
construction, installation and buildability
legal and regulatory
health and safety
cost
environmental
required lifecycle
use
new materials and technologies
project type, purpose, location
anticipated development timetable
client requirements
performance
conservation
value engineering
visual and spatial
programming
energy use.

4 Presenting:

orally
in writing
graphically
electronically.

5 Decision makers:

the client
financial advisers
consultants
potential contractors and suppliers
potential investors
partners in the development programme
potential occupiers
potential users
regulatory authorities
public interest organisations.

Learning outcomes 5 and 6:

1 Project Stakeholders:

the client
the client's financial advisers
design consultants
potential contractors
potential subcontractors and suppliers
potential investors
funding agencies
independent client advisers
user groups.

2 Presentation methods:

documentary
quality benchmarking analysis
comparative studies with similar projects
illustrated oral presentations
computer modelled simulations.

3 Audience:

client
financial advisers
consultants
potential contractors
potential subcontractors and suppliers
potential investors
partners in development programme
potential occupiers
potential users
regulatory authorities
public interest organisations
media.

Learning outcomes 7 and 8:

1 Advising - methods:

in writing
orally
use graphics
electronically.

2 Stakeholders:

the client
financial advisers
consultants
potential contractors and suppliers
potential investors
partners in development programme
potential occupiers
potential users
regulatory authorities
public interest organisations.

3 Implications for:

cost
the programme
performance
design quality
value for money
buildability
health and safety
environment
sustainability.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of significant factors and dates based on analysis of information available and production of design concepts (1.1, 1.2, 1.3, 1.4) [1.1]
- 2 Selection of design concepts (1.5) [1.1]
- 3 Team recommendations and advice to clients (1.6, 1.7)

Process Evidence: not applicable

Learning outcome 3:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Developed design options which consider both existing and new design approaches (3.1, 3.2, 3.3, 3.4) [3.1]
- 2 Records of tests which include refined design options and information about design options which have been rejected (3.5, 3.6, 3.7, 3.8, 3.11) [3.2, 3.3]
- 3 Recommended modifications to design briefs which include assessment of the implications of making modifications (3.9, 3.10) [3.3, 3.4, 3.5]

Process Evidence:

- 1 Presentations of design options (3.11) [3.4, 3.5]

Learning outcome 5:**Product evidence:**

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence

- 1 Presented recommendations proposals and design options, which include agreed methods, materials, evidence to support changes to the agreed criteria (5.1, 5.2, 5.3, 5.4, 5.5, 5.6) [5.1, 5.2]
- 2 Records of audience responses (5.6) [5.2]

Process Evidence:

- 1 Presentations of recommendations, proposals and design options which include encouraging the audience members to ask questions, make comments and seek clarification (5.3, 5.4, 5.5, 5.6) [ALL]

Learning outcome 7:**Product evidence:**

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of identified elements of designs and changes related to the design brief (7.1, 7.2) [7.3]
- 2 Records of advice and explanations (ALL) [ALL]

Process Evidence:

- 1 Advice and explanations (7.3, 7.4, 7.5) [ALL]

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to identify and assess significant factors affecting the project design</p>	<p>1.1 obtain information which is relevant to the development of the design brief</p> <p>1.2 analyse the findings of investigations and identify significant factors which may influence existing and anticipated development</p> <p>1.3 format and collate data and conclusions from specialist research and design evaluation, and circulate the documents to project team members</p> <p>1.4 analyse the significant factors with the project team, and produce realistic design parameters which recognise opportunities and constraints</p> <p>1.5 select design concepts for further development by the project team which appear to meet the requirements of the design brief and which resolve a significant number of constraints on development</p> <p>1.6 agree recommendations with the project team</p> <p>1.7 advise the client on the most appropriate courses of action</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to identify and assess significant factors affecting the project design</p>	<p>2.1 explain how to obtain information which is relevant to the development of the design brief</p> <p>2.2 examine how to analyse the findings of investigations and identify significant factors which may influence existing and anticipated development</p> <p>2.3 explain how to format and collate data and conclusions from specialist research and design evaluation, and circulate the documents to project team members</p> <p>2.4 examine how to analyse the significant factors with the project team, and produce realistic design parameters which recognise opportunities and constraints</p> <p>2.5 examine how to select design concepts for further development by the project team which appear to meet the requirements of the design brief and which resolve a significant number of constraints on development</p> <p>2.6 evaluate how to agree recommendations with the project team</p> <p>2.7 propose how to advise the client on the most appropriate courses of action</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to select, test and refine design options</p>	<p>3.1 identify existing design approaches which are potentially consistent with the brief and likely to lead to appropriate solutions, and select those which are most likely to contribute to design ideas</p> <p>3.2 obtain new sources of information and ideas, where existing design approaches do not meet the parameters of the brief, which have the potential to suggest new and innovative design options</p> <p>3.3 discuss the selected design options with project team members, assess their observations and note them for future reference</p> <p>3.4 develop the design options which appear to have the greatest potential for success so that they are capable of being tested</p> <p>3.5 select and commission appropriate tests which will give valid and relevant information about the design option</p> <p>3.6 implement, monitor and record tests so that the validity of the design options is maintained, and match the results to significant parameters of the brief</p> <p>3.7 refine design options which meet the parameters of the brief and test them repetitively until their ability to meet the selected design parameters is clearly established</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>3.8 reject design options which fail to meet the design parameters and identify more suitable design approaches</p> <p>3.9 recommend modifications to the brief in order to consider selected options and approaches which may meet the design parameters, but fail to meet all the design brief requirements</p> <p>3.10 assess the implications of modify the design brief so that the overall integrity is retained</p> <p>3.11 record feasible design options accurately and present them in sufficient detail so that decision makers can select design options</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to select, test and refine design options</p>	<p>4.1 describe how to identify existing design approaches which are potentially consistent with the brief and likely to lead to appropriate solutions, and select those which are most likely to contribute to design ideas</p> <p>4.2 explain how to obtain new sources of information and ideas, where existing design approaches do not meet the parameters of the brief, which have the potential to suggest new and innovative design options</p> <p>4.3 explain how to discuss the selected design options with project team members, assess their observations and note them for future reference</p> <p>4.4 propose how to develop the design options which appear to have the greatest potential for success so that they are capable of being tested</p> <p>4.5 evaluate how to select and commission appropriate tests which will give valid and relevant information about the design option</p> <p>4.6 explain how to implement, monitor and record tests so that the validity of the design options is maintained, and match the results to significant parameters of the brief</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>4.7 explain how to refine design options which meet the parameters of the brief and test them repetitively until their ability to meet the selected design parameters is clearly established</p> <p>4.8 evaluate how to reject design options which fail to meet the design parameters and identify more suitable design approaches</p> <p>4.9 propose how to recommend modifications to the brief in order to consider selected options and approaches which may meet the design parameters, but fail to meet all the design brief requirements</p> <p>4.10 examine how to assess the implications of modify the design brief so that the overall integrity is retained</p> <p>4.11 explain how to record feasible design options accurately and present them in sufficient detail so that decision makers can select design options</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>5 Be able to prepare and present project design recommendations</p>	<p>5.1 agree with the client and the project team the purpose of the presentation</p> <p>5.2 choose and agree effective presentation methods and techniques which will communicate design ideas clearly</p> <p>5.3 prepare clear and accurate presentational materials which support the design options and use them to facilitate discussions</p> <p>5.4 present and explain the project design recommendations clearly and objectively and show how they are justified by the requirements of the brief</p> <p>5.5 present the project design recommendations in a way which promotes the goodwill and trust of the audience</p> <p>5.6 encourage the audience to ask questions, ask for clarification and to make comments at appropriate stages in the presentation and provide additional information to ensure their understanding</p> <p>5.7 provide valid evidence to support design recommendations which do not meet all the requirements of the brief</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>6 Understand how to prepare and present project design recommendations</p>	<p>6.1 evaluate how to agree with the client and the project team the purpose of the presentation</p> <p>6.2 evaluate how to choose and agree effective presentation methods and techniques which will communicate design ideas clearly</p> <p>6.3 explain how to prepare clear and accurate presentational materials which support the design options and use them to facilitate discussions</p> <p>6.4 explain how to present and explain the project design recommendations clearly and objectively and show how they are justified by the requirements of the brief</p> <p>6.5 explain how to present the project design recommendations in a way which promotes the goodwill and trust of the audience</p> <p>6.6 propose how to encourage the audience to ask questions, ask for clarification and to make comments at appropriate stages in the presentation and provide additional information to ensure their understanding</p> <p>6.7 explain how to provide valid evidence to support design recommendations which do not meet all the requirements of the brief</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>7 Be able to advise on changes to the design brief and design recommendations</p>	<p>7.1 identify those elements of designs which meet the requirements of the original design brief and those that do not</p> <p>7.2 agree and record the variations to the design brief and to the design proposals which resulted from the presentations and which the client requires</p> <p>7.3 advise stakeholders on the implications of accept, modify or reject design proposals and ensure that they understand their implications</p> <p>7.4 advise stakeholders on how much more advice, research and consultancy is needed to produce a project design which is acceptable</p> <p>7.5 confirm with the stakeholders whether the design recommendation is accepted, modified or rejected</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>8 Understand how to advise on changes to the design brief and design recommendations</p>	<p>8.1 describe how to identify those elements of designs which meet the requirements of the original design brief and those that do not</p> <p>8.2 evaluate how to agree and record the variations to the design brief and to the design proposals which resulted from the presentations and which the client requires</p> <p>8.3 propose how to advise stakeholders on the implications of accept, modify or reject design proposals and ensure that they understand their implications</p> <p>8.4 propose how to advise stakeholders on how much more advice, research and consultancy is needed to produce a project design which is acceptable</p> <p>8.5 explain how to confirm with the stakeholders whether the design recommendation is accepted, modified or rejected.</p>			

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Unit 3: Develop detailed designs in the built environment

Unit reference number: R/600/7841

QCF level: 6

Credit value: 20

Guided learning hours: 80

Unit summary

This unit is concerned with carrying out detailed designs and is the technical heart of the award. Learners must know about relevant current legislation eg building regulations and DDA.

It is about ensuring that all aspects of the design process are integrated. You must be able to take an overview of the process and set up a system which will produce an holistic design that is coherent and consistent.

It is about deciding what materials, components and systems will incorporate the finished product. You must have a deep knowledge of the available options, and be able to make informed choices. This Element will challenge your technical competence.

It is about producing the details of the design solution and is about your technical competence. If you delegate some of these tasks to others, you must be able to demonstrate your accountability for any work you delegate to others.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Stakeholders:

- the client
- consultants
- potential contractors
- potential subcontractors and suppliers
- regulatory authorities.

2 Format for presenting the detailed design information:

in writing
graphically
electronically.

3 Aspects of the overall project design:

location and size
assembly and construction
components and systems.

4 Maintain coherence and consistency:

visual and spatial
functional performance
technical performance
requirements of relevant legislation and codes
cost
health and safety
environmental sustainability
buildability
value management
concurrent design and construction
energy use.

5 Techniques:

data research
conformity with regulations
specialist guidance and good practice
relevant previous solutions and feedback
modelling
calculation.

Learning outcomes 3 and 4:

1 Construction and installation requirements:

client and user context
project type
purpose
site and location
durability
scale
occupancy
legal and regulatory constraints
flexibility and adaptability
client, user and community expectations, options and preferences
adjacent site conditions
environmental
specified materials and component performance standards
specified technical performance standards
available and projected technology
health and safety
buildability
quality
cost
scheduling
security
whole-life costs
sustainability
structural forms
heating and cooling
energy use
fire protection
equipment performance
resource availability
transportation and access.

2 Standards:

British Standards and Codes of Practice

BBA certificates

EU Standards

trade advisory guidance publications

BRE publications

CIRIA publications

client standards.

Learning outcomes 5 and 6:

1 identify:

standard lists and procedures

investigative research.

2 Factors:

physical (including hydrology, geology, seismology, tides and currents, soil type, exposure, orientation, solar gain, light levels, temperature range, wind speed)

technical (including materials performance and availability, prefabricated components, building services and control, structural forms, component life, heating and cooling, surface type and durability, occupancy, health and safety, fire protection, access, equipment performance, plant availability, human resource availability, transportation, traffic generation)

environmental (sustainability, energy use, resource availability, local ecology, emissions, pollution risk)

cost

time

health and safety

resources

standards and codes of practice

fitness of purpose.

3 Data:

identified construction criteria

existing design solutions.

4 Criteria:

function
physical
fit and tolerances
practicality and buildability
health and safety
maintenance
cost factors
materials availability and capability
environmental quality & sustainability
aesthetics
technical
flexibility and adaptability
access (including disability).

5 Investigations:

data research
conformity with regulations
specialist guidance and good practice
relevant previous solutions and feedback
computer aided analysis.

6 Calculations:

manual
computer aided.

7 Presenting:

orally
in writing
graphically
electronically.

8 Stakeholders:

financial advisers
consultants
potential subcontractors and suppliers
potential investors
prospective occupiers
media.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of identified aspects of the overall project which require detailed design which includes agreed ways of maintaining coherence and consistency between all aspects of the detailed design (1.1, 1.2, 1.3, 1.4) [1.1, 1.2, 1.3]
- 2 Records of procedures which have been set up to maintain coherence and consistency between the detailed design solutions and the overall design concept (1.5) [1.4]
- 3 Records of selected techniques to be used for developing detailed design solutions and detailed designs (1.6, 1.7) [1.5]

Process Evidence: not applicable

Learning outcome 3:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Plans for investigations to identify construction and installation requirements which are significant to the overall design (3.1, 3.2) [3.1]
- 2 Records of selected materials, components and systems (3.4) [3.1, 3.2]
- 3 Assessments of existing design solutions and evaluations of chosen solutions (3.3, 3.5) [3.1, 3.2]

Process Evidence: not applicable

Learning outcome 5:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of agreed criteria for selecting detailed design solutions (5.1, 5.2, 5.3) [5.1, 5.2, 5.3, 5.4]
- 2 Records of data from calculations, investigations and analyses including checking (5.4, 5.5) [5.5, 5.6]
- 3 Records of selected preferred design solutions and those which might be useful in further projects (5.6, 5.7) [5.7, 5.8]

Process Evidence:

- 1 Presentations of preferred designs (5.5) [5.6, 5.7]

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to identify the purpose, methods and techniques for preparing detailed designs</p>	<p>1.1 agree with the stakeholders the uses for the detailed design information</p> <p>1.2 choose a format for presenting the detailed design information which meets the requirements of the stakeholders</p> <p>1.3 identify the aspects of the overall project design which require detailed design</p> <p>1.4 identify the aspects of the overall project design which interact with each other, and agree ways to maintain coherence and consistency between all aspects of the detailed design</p> <p>1.5 set up procedures which will maintain coherence and consistency between the detailed design solutions and the overall design concept</p> <p>1.6 select techniques which are suitable for investigating, calculating, testing, developing and specifying detailed design solutions</p> <p>1.7 select techniques for developing detailed designs and associated information which are consistent with best industry practice and which conform to relevant codes of practice</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to identify the purpose, methods and techniques for preparing detailed designs</p>	<p>2.1 evaluate how to agree with the stakeholders the uses for the detailed design information</p> <p>2.2 evaluate how to choose a format for presenting the detailed design information which meets the requirements of the stakeholders</p> <p>2.3 understand how to identify the aspects of the overall project design which require detailed design</p> <p>2.4 understand how to identify the aspects of the overall project design which interact with each other, and agree ways to maintain coherence and consistency between all aspects of the detailed design</p> <p>2.5 propose how to set up procedures which will maintain coherence and consistency between the detailed design solutions and the overall design concept</p> <p>2.6 evaluate how to select techniques which are suitable for investigating, calculating, testing, developing and specifying detailed design solutions</p> <p>2.7 evaluate how to select techniques for developing detailed designs and associated information which are consistent with best industry practice and which conform to relevant codes of practice</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to identify and select materials, components and systems</p>	<p>3.1 identify and investigate the construction and installation requirements which are significant to the overall design, both individually and combined with other project considerations</p> <p>3.2 prioritise the construction and installation requirements of the agreed design</p> <p>3.3 assess whether existing design solutions which contain similar construction and installation requirements might be relevant</p> <p>3.4 select materials, components and systems which meet the identified construction and installation requirements and standards</p> <p>3.5 choose the solutions which best meet the significant construction and installation requirements, evaluate them against the requirements of the agreed design and keep records of them for the project team</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to identify and select materials, components and systems</p>	<p>4.1 describe how to identify and investigate the construction and installation requirements which are significant to the overall design, both individually and combined with other project considerations</p> <p>4.2 examine how to prioritise the construction and installation requirements of the agreed design</p> <p>4.3 examine how to assess whether existing design solutions which contain similar construction and installation requirements might be relevant</p> <p>4.4 evaluate how to select materials, components and systems which meet the identified construction and installation requirements and standards</p> <p>4.5 evaluate how to choose the solutions which best meet the significant construction and installation requirements, evaluate them against the requirements of the agreed design and keep records of them for the project team</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>5 Be able to investigate, produce and analyse detailed design solutions</p>	<p>5.1 identify, analyse and prioritise the factors and data which are likely to influence the detailed design solutions, decide which are the most important and resolve any conflicts between the different factors</p> <p>5.2 agree criteria for selecting and producing detailed design solutions</p> <p>5.3 produce detailed design solutions by applying agreed criteria</p> <p>5.4 record the data from calculations, investigations and analyses and pass them on for checking</p> <p>5.5 assess the detailed design solutions against all relevant factors, and recheck the results</p> <p>5.6 select the preferred designs and present them to stakeholders</p> <p>5.7 maintain records of detailed design solutions which have not been selected but which might be useful in further projects</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>6 Understand how to investigate, produce and analyse detailed design solutions</p>	<p>6.1 understand how to identify, analyse and prioritise the factors and data which are likely to influence the detailed design solutions, decide which are the most important and resolve any conflicts between the different factors</p> <p>6.2 evaluate how to agree criteria for selecting and producing detailed design solutions</p> <p>6.3 explain how to produce detailed design solutions by applying agreed criteria</p> <p>6.4 explain how to record the data from calculations, investigations and analyses and pass them on for checking</p> <p>6.5 examine how to assess the detailed design solutions against all relevant factors, and recheck the results</p> <p>6.6 evaluate how to select the preferred designs and present them to stakeholder</p> <p>6.7 explain how to maintain records of detailed design solutions which have not been selected but which might be useful in further projects.</p>			

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Unit 4: Agree detailed designs in the built environment

Unit reference number: M/600/7846

QCF level: 6

Credit value: 20

Guided learning hours: 70

Unit summary

This unit is concerned with agreeing detailed designs. It deals in depth with safety and risk considerations within the design process. Learners must know about relevant current legislation eg building regulations and DDA.

It is about ensuring that all aspects of the design process are integrated. You must be able to take an overview of the process and set up a system which will produce an holistic design that is coherent and consistent.

It is about agreeing with the stakeholders what you have done so far. You must report on progress to date, justify the decisions you have taken, and gain people's trust and support.

It is about identifying the hazards arising from the design process, eliminating them where possible, and minimising the risks arising from any residual hazards. For the purposes of this Unit, a hazard is something with the potential to cause harm, and a risk is the likelihood of harm being caused, and the degree of its severity. The strategy for managing risk uses a hierarchy of eliminate/reduce/inform/control measures.

Assessment requirements/evidence requirements

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Stakeholders:

- the client
- the client's financial advisers
- consultants
- potential contractors and suppliers
- potential investors
- partners in the development programme
- potential occupiers
- public interest organisations

local authorities
government agencies
internal.

2 Justifying (by use):

sketches
drawings
physical models
computer generated data
diagrams
mathematical modelling
written reports
cost
programmes
outline approvals from regulatory authorities.

3 Project design solution consists of:

sketches
drawings
physical models
computer generated data
diagrams
mathematical models
written reports
cost estimates
programming
outline approvals from regulatory authorities.

Learning outcomes 3 and 4:

1 Clients:

customers
owners
users
occupiers.

2 Health and safety regulations:

CDM regulations and Approved Codes of Practice
Current health, safety and welfare regulations
Construction and Building Regulations.

3 Interested parties:

plan supervisor/coordinator
other designers
specialist advisors
clients
construction and construction managers
contractors and specialist contractors.

4 Operations and individual activities:

constructing (infrastructure, structure, building fabric, finishes, services and equipment, landscape)
use
cleaning
maintaining
altering
demolition
commissioning and decommissioning.

5 Hazards:

falls from height
slips, trips and falls
hit by falling or moving objects
manual handling
health issues
power sources
hazardous substances
trapped by something collapsing or overturning
confined spaces
fire
obstructions
moving vehicles.

6 Potential consequences:

injuring people
cause ill health
damaging property
adversely affecting the natural and built environment
contravening legislative requirements
litigation and prosecution
working conditions and circumstances, buildability.

7 Assessing:

likelihood of occurrence
severity of harm incurred.

8 Risks:

high
medium
low.

Learning outcomes 5 and 6:

1 Hazards:

falls from height
slips, trips and falls
hit by falling or moving objects
manual handling
health issues
power sources
hazardous substances
trapped by something collapsing or overturning
confined spaces
fire
obstructions
moving vehicles.

2 Developing and modify;

plan

investigation

verifying competence and resources

analysis

identify interactions

calculation

testing

selecting materials, components and systems

detailing and specifying

consideration of costs and benefits (including whole life costing).

3 Designs:

infrastructure

structure

building fabric

finishes

services and equipment

landscape

temporary works

prefabrication.

4 Measures:

eliminate

reduce

inform

control.

5 Risks:

high

medium

low.

6 Design documentation:

drawings

specifications

models

calculations

Health and Safety Plans and Files.

7 Relevant health and safety regulations:

CDM regulations and Approved Code of Practice
current health, safety and welfare regulations
Construction and Building Regulations.

8 Other people involved:

contractors
maintainers
owners
users.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Information provided to project stakeholders (1.1) [1.1]
- 2 Records of assessments and justifications of recommended design solutions (1.2, 1.3) [1.1, 1.2, 1.3]
- 3 Agreements to move to the next stage of the project (1.4) [1.1]

Process Evidence: not applicable

Learning outcome 3:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of client checks (3.1) [3.1, 3.2]
- 2 Iterative hazard assessments, that include collaboration with interested parties and identified risks (3.2, 3.3, 3.4, 3.5, 3.6) [3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8]

Process Evidence: not applicable

Learning outcome 5:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of eliminated hazards (5.1) [5.1, 5.2]
- 2 Records of risk reduction measures (5.2, 5.3, 5.4) [5.1, 5.2, 5.4, 5.5, 5.6]
- 3 Design information needed by others (5.5) [5.6, 5.7, 5.8]

Process Evidence: not applicable

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Be able to agree a detailed design	<p>1.1 provide stakeholders with relevant and accurate information at the right time to agree a detailed design</p> <p>1.2 assess and justify the features and benefits of the recommended detailed project design solution</p> <p>1.3 compare the recommended detailed project design solution with the requirements of the agreed design and justify its selection</p> <p>1.4 reach an agreement on the project design solution which is acceptable to the stakeholders and which allows the project to progress to its next stage</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to agree a detailed design</p>	<p>2.1 propose how to provide stakeholders with relevant and accurate information at the right time to agree a detailed design</p> <p>2.2 examine how to assess and justify the features and benefits of the recommended detailed project design solution</p> <p>2.3 propose how to compare the recommended detailed project design solution with the requirements of the agreed design and justify its selection</p> <p>2.4 propose how to reach an agreement on the project design solution which is acceptable to the stakeholders and which allows the project to progress to its next stage</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to review and assess health and safety hazards</p>	<p>3.1 check that clients are made aware of the relevant health and safety regulations, their obligations in relation to them and the advantages in complying with them</p> <p>3.2 collaborate with interested parties so that the designs comply with relevant health and safety regulations</p> <p>3.3 identify operations and individual activities that may give rise to hazards</p> <p>3.4 identify and prioritise the hazards arising from operations and individual activities</p> <p>3.5 obtain accurate information on any potential consequences resulting from the hazards</p> <p>3.6 assess the hazards to identify risks on an iterative basis throughout the development process</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to review and assess health and safety hazards</p>	<p>4.1 explain how to check that clients are made aware of the relevant health and safety regulations, their obligations in relation to them and the advantages in complying with them</p> <p>4.2 propose how to collaborate with interested parties so that the designs comply with relevant health and safety regulations</p> <p>4.3 describe how to identify operations and individual activities that may give rise to hazards</p> <p>4.4 describe how to identify and prioritise the hazards arising from operations and individual activities</p> <p>4.5 explain how to obtain accurate information on any potential consequences resulting from the hazards</p> <p>4.6 examine how to assess the hazards to identify risks on an iterative basis throughout the development process</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>5 Be able to make design choices to manage health and safety risks</p>	<p>5.1 eliminate identified hazards whilst developing and modifying detailed designs</p> <p>5.2 reduce identified risks arising from hazards which are not eliminated when developing and modifying designs</p> <p>5.3 give collective measures priority over individual measures when reducing risks</p> <p>5.4 verify that the risk reduction measures comply with relevant health and safety regulations and guidelines</p> <p>5.5 record in design documentation any information needed by other people involved so that they can comply with their duties under relevant health and safety regulations</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>6 Understand how to make design choices to manage health and safety risks</p>	<p>6.1 describe how to eliminate identified hazards whilst developing and modifying detailed designs</p> <p>6.2 explain how to reduce identified risks arising from hazards which are not eliminated when developing and modifying designs</p> <p>6.3 explain how to give collective measures priority over individual measures when reducing risks</p> <p>6.4 examine how to verify that the risk reduction measures comply with relevant health and safety regulations and guidelines</p> <p>6.5 explain how to record in design documentation any information needed by other people involved so that they can comply with their duties under relevant health and safety regulations.</p>			

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Assessor signature: _____ Date: _____

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Unit 5: **Develop and maintain professional relationships and practice in built environment design**

Unit reference number: R/600/7855

QCF level: 6

Credit value: 23

Guided learning hours: 40

Unit summary

This unit is concerned with the integration of your personal and professional competence.

It is about getting the best out of your relationships with other people. This is about “emotional competence” – being confident about your own control of yourself, the design itself and the project team, so that you can deal with the concerns of other people in a constructive way.

It is about communicating technical information to other people, and ensuring that they understand it. You must be able to “talk their language”, and maintain their trust in you and their support for your work.

It is about identifying problems, producing alternative solutions, and recommending the best ones. The “situation” in the Element title could be both a challenge and an opportunity. You will need to demonstrate your technical competence as a designer.

It is about working within appropriate codes of conduct.

It is about managing meetings effectively. You must be able to agree the objectives of the meeting, manage the meeting to maximise everyone’s contribution, summarise what has been achieved, and tell those who need to know.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 People:

- those to whom you report
- those who report to you
- other professional colleagues
- those affected by your work.

2 Informing, offering advice, presenting and clarify:

- orally
- in writing
- use graphics
- electronically.

3 Work activities:

- progress
- results
- achievements
- emerging threats
- risks
- opportunities.

Learning outcomes 3 and 4:

1 Purpose:

- sharing experience
- issuing instructions
- making decisions
- increasing understanding
- implement a solution
- deal with confrontation
- negotiation.

2 Presenting:

orally
in writing
graphically
electronically.

3 People receiving information and advice:

same and other related occupations
clients and customers
technical and non-technical team members
craftspeople and operatives
senior and junior colleagues
members of the public
people with individual needs.

Learning outcomes 5 and 6:

1 Information - sources:

experience and practice
manual and electronic information systems (eg libraries, technical journals, databases)
valid objects of scientific enquiry
other colleagues and specialists.

2 Analysing the different perceptions of situations:

information and conclusions from previous cases
similarities between previous cases and the current situation
the outcomes required
known and anticipated limitations
known and anticipated opportunities.

3 Aids and techniques:

identify options
relationships between factors
weighted priorities
value utilities
expert systems
decision theory
decision trees
policy capturing equations
gold standard equations
graphical and electronic aids
computer aided analysis.

4 Criteria:

the interests of the stakeholders
legal
conformity with recognised good practice
based on up to date information
cost-effectiveness
resources
safety
return to operational state
predicted risk
predicted disruption
predicted opportunity
added value.

5 Judgements:

justified opinion and conclusion
decisions on action to be taken
decisions on validity
decisions on viability
identification of opportunities
identification of solutions.

Learning outcomes 7 and 8:

1 Ethical standards and recognised good practice - sources:

mandatory ethical codes of practice within the occupation or discipline
statute law
voluntary codes of practice
duty of care.

2 Conflicts of interest:

offers which may result in adverse conditions to other individuals or the community
offers which involve the financial interest of the practitioner
give unfair advantage to the practitioners family or friends.

3 Stakeholders:

staff
clients
suppliers/sub-contractors
users
community.

Learning outcome 9 and 10:

1 Meeting:

involving people from within your organisation
involving people outside your organisation.

2 Objective:

information give
consultation
decision making
subsequent actions.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:**Product evidence:**

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Information and advice provided about work activities (1.1, 1.2, 1.3, 1.6) [ALL]
- 2 Proposals presented, including clarification and alternatives offered (1.1, 1.4, 1.5, 1.6) [1.1, 1.2, 1.3]

Process Evidence:

- 1 Information, advice and presentations (ALL) [ALL]

Learning outcome 3:**Product evidence:**

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence

- 1 Technical information and advice presented, including technical information obtained in significant detail which has been modified and adapted (3.1, 3.2, 3.3, 3.5, 3.6) [3.1, 3.2, 3.3]
- 2 Records of technical instructions and guidance (3.4)
- 3 Records of technical recommendations duly adapted and modified (3.6)

Process Evidence:

- 1 Presenting technical information, advice, recommendations and guidance (3.2, 3.3, 3.4, 3.6) [3.2]

Learning outcome 5:**Product evidence:**

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Assessments and summaries of situations and information obtained which include estimates of effects (5.1, 5.2) [5.1]
- 2 Records of analyses of situations which include probable factors, different perceptions, clear criteria, applied aids and techniques and judgements (5.3, 5.4, 5.5, 5.6) [5.5]

- 3 Records of solutions and judgements which have been identified, justified and recommended and which include criteria (5.6, 5.7) [5.5]

Process Evidence: not applicable

Learning outcome 7:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of contracts agreements and terms of reference which include conformance to legal requirements, ethical standards and recognised good practice (7.1, 7.2, 7.3, 7.8, 7.9) [7.1, 7.2, 7.3]
- 2 Records of balanced judgments, advice and personal decisions (7.4, 7.5, 7.8, 7.9) [7.1, 7.2, 7.3]

Process Evidence: not applicable

Learning outcome 9:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 You must show evidence of leading both types of meeting (9.1, 9.2, 9.3, 9.4, 9.6, 9.7, 9.10) [9.1]
- 2 You must prove that you chair meetings to the National Standard of competence. (9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10) [9.1, 9.2]
- 3 You must show evidence of leading meetings with all types of objective (9.1, 9.2, 9.4, 9.6, 9.10) [9.1]
- 4 Your evidence must be the result of real work activities undertaken by yourself. (9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10) [9.1, 9.2]

Process Evidence: not applicable

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to develop and maintain relationships with other people</p>	<p>1.1 develop, maintain and encourage working relationships with people which promote goodwill and trust</p> <p>1.2 inform people about work activities with an appropriate level of detail and degree of urgency</p> <p>1.3 offer advice and help to people about work activities with sensitivity and encourage questions, requests for clarification and comments</p> <p>1.4 present proposals for action clearly to people at an appropriate time and with the right level of detail for the degree of change, expenditure and risk involved</p> <p>1.5 clarify with people objections to proposals and suggest alternative proposals</p> <p>1.6 resolve conflicts and differences of opinion in ways which minimise offence, and maintain goodwill, trust and respect</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to develop and maintain relationships with other people</p>	<p>2.1 propose how to develop, maintain and encourage working relationships with people which promote goodwill and trust</p> <p>2.2 explain how to inform people about work activities with an appropriate level of detail and degree of urgency</p> <p>2.3 propose how to offer advice and help to people about work activities with sensitivity and encourage questions, requests for clarification and comments</p> <p>2.4 explain how to present proposals for action clearly to people at an appropriate time and with the right level of detail for the degree of change, expenditure and risk involved</p> <p>2.5 explain how to clarify with people objections to proposals and suggest alternative proposals</p> <p>2.6 propose how to resolve conflicts and differences of opinion in ways which minimise offence, and maintain goodwill, trust and respect</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to exchange information and present advice on technical issues</p>	<p>3.1 obtain information which is sufficiently detailed for the purpose</p> <p>3.2 present technical information and advice which is complete, summarised accurately and relevant to technical issues</p> <p>3.3 present technical recommendations which are clear, accurate and valid, and which represent the best advice possible, given the information and resources available</p> <p>3.4 give technical instructions and guidance which are likely to be understood by the people who will follow them</p> <p>3.5 present technical information and advice using a style of communication which is appropriate to the people receiving information and advice</p> <p>3.6 adapt and modify technical information where people have difficulties in understanding it</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to exchange information and present advice on technical issues</p>	<p>4.1 explain how to obtain information which is sufficiently detailed for the purpose</p> <p>4.2 explain how to present technical information and advice which is complete, summarised accurately and relevant to technical issues</p> <p>4.3 explain how to present technical recommendations which are clear, accurate and valid, and which represent the best advice possible, given the information and resources available</p> <p>4.4 propose how to give technical instructions and guidance which are likely to be understood by the people who will follow them</p> <p>4.5 explain how to present technical information and advice using a style of communication which is appropriate to the people receiving information and advice</p> <p>4.6 explain how to adapt and modify technical information where people have difficulties in understanding it</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>5 Be able to identify, analyse and resolve complex, indeterminate situations</p>	<p>5.1 identify where complex, indeterminate situations exist, estimate their effects and summarise the issues for the people who are affected and concerned</p> <p>5.2 assess the accuracy and completeness of the information available, identify any significant gaps and obtain additional information</p> <p>5.3 identify, describe and record the probable factors affecting the situations</p> <p>5.4 analyse the different perceptions of situations in order to produce resolutions</p> <p>5.5 apply aids and techniques which increase the reliability of the decisions and judgements</p> <p>5.6 identify and justify, use clear criteria and reasoned arguments, ethical judgements which are likely to resolve the situation with the least disruption and risk</p> <p>5.7 recommend and record those judgements which offer the least disruption and risk</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>6 Understand how to identify, analyse and resolve complex, indeterminate situations</p>	<p>6.1 describe how to identify where complex, indeterminate situations exist, estimate their effects and summarise the issues for the people who are affected and concerned</p> <p>6.2 examine how to assess the accuracy and completeness of the information available, identify any significant gaps and obtain additional information</p> <p>6.3 describe how to identify, describe and record the probable factors affecting the situations</p> <p>6.4 examine how to analyse the different perceptions of situations in order to produce resolutions</p> <p>6.5 explain how to apply aids and techniques which increase the reliability of the decisions and judgements</p> <p>6.6 describe how to identify and justify, use clear criteria and reasoned arguments, ethical judgements which are likely to resolve the situation with the least disruption and risk</p> <p>6.7 propose how to recommend and record those judgements which offer the least disruption and risk</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>7 Be able to practise within an ethical framework</p>	<p>7.1 identify the limits of your professional expertise and work within them</p> <p>7.2 contribute to developing and maintaining a value base for one's organisation which considers the needs of the stakeholders</p> <p>7.3 make judgements and offer advice which balance the needs of the client, the people in the community who are directly and indirectly affected and the resources available</p> <p>7.4 take clear and unequivocal personal responsibility for decisions</p> <p>7.5 disclose information obtained from clients only to people who have a right to receive it</p> <p>7.6 communicate with stakeholders in a style and manner which maintains professional independence and maximises goodwill and trust</p> <p>7.7 define and agree the terms of reference and the expectations of the people involved in contracts</p> <p>7.8 enter into formal and informal contracts and agreements for advisory and problem-solving services which conform to legal requirements, ethical standards and recognised good practice</p> <p>7.9 refuse offers and contracts which are illegal and which may generate conflicts of interest</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>8 Understand how to practise within an ethical framework</p>	<p>8.1 describe how to identify the limits of your professional expertise and work within them</p> <p>8.2 explain how to contribute to developing and maintaining a value base for one's organisation which considers the needs of the stakeholders</p> <p>8.3 evaluate how to make judgements and offer advice which balance the needs of the client, the people in the community who are directly and indirectly affected and the resources available</p> <p>8.4 evaluate how to take clear and unequivocal personal responsibility for decisions</p> <p>8.5 explain how to disclose information obtained from clients only to people who have a right to receive it</p> <p>8.6 explain how to communicate with stakeholders in a style and manner which maintains professional independence and maximises goodwill and trust</p> <p>8.7 evaluate how to define and agree the terms of reference and the expectations of the people involved in contracts</p> <p>8.8 evaluate how to enter into formal and informal contracts and agreements for advisory and problem-solving services which conform to legal requirements, ethical standards and recognised good practice</p> <p>8.9 evaluate how to refuse offers and contracts which are illegal and which may generate conflicts of interest</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>9 Be able to chair meetings</p>	<p>9.1 ensure that the appropriate people are invited the meeting and given sufficient notice and information to allow them to contribute effectively</p> <p>9.2 ensure that everyone attending the meeting agrees the objective of the meeting at the start</p> <p>9.3 allocate discussion time to topics consistently with their importance, urgency and complexity</p> <p>9.4 maintain a style of leadership which helps those attending the meeting to make useful contributions</p> <p>9.5 discourage unhelpful arguments and digressions</p> <p>9.6 present information and provide summaries clearly, at appropriate points during the meeting</p> <p>9.7 ensure that meetings achieve their objectives within the allocated time</p> <p>9.8 ensure that agreed decisions and recommendations fall within the groups authority</p> <p>9.9 give clear, accurate and concise information about decisions and recommendations to those who need it</p> <p>9.10 seek feedback from those attending and use this to improve the effectiveness of future meetings</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>10 Understand how to chair meetings</p>	<p>10.1 explain how to ensure that the appropriate people are invited to the meeting and given sufficient notice and information to allow them to contribute effectively</p> <p>10.2 explain how to ensure that everyone attending the meeting agrees the objective of the meeting at the start</p> <p>10.3 explain how to allocate discussion time to topics consistently with their importance, urgency and complexity</p> <p>10.4 explain how to maintain a style of leadership which helps those attending the meeting to make useful contributions</p> <p>10.5 explain how to discourage unhelpful arguments and digressions</p> <p>10.6 explain how to present information and provide summaries clearly, at appropriate points during the meeting</p> <p>10.7 explain how to ensure that meetings achieve their objectives within the allocated time</p> <p>10.8 explain how to ensure that agreed decisions and recommendations fall within the groups authority</p> <p>10.9 propose how to give clear, accurate and concise information about decisions and recommendations to those who need it</p> <p>10.10 explain how to seek feedback from those attending and use this to improve the effectiveness of future meetings.</p>			

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Assessor signature: _____
Internal verifier signature: _____
(if sampled)

Date: _____
Date: _____
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Unit 6: Investigate and assess development options in built environment design

Unit reference number: M/600/7863

QCF level: 6

Credit value: 22

Guided learning hours: 60

Unit summary

This unit is concerned with investigating development options, taking into account relevant influencing factors, including environmental and social impact issues.

It covers investigating and evaluating a project's development options so that they can be prioritised. You must be able to show that you identify project goals and priorities, investigate potential development options and evaluate these against environmental and social criteria, as well as duly considering stakeholder views.

It is a more detailed analysis of the potential environmental impact of the project development options and their impact upon stakeholders' respective corporate social responsibilities and values. You must be able to investigate project requirements and identify and quantify relevant influencing factors in order to present solutions.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Goals and priorities:

- security
- health and safety
- quantity
- quality (including design)
- time
- whole life costs
- environmental
- sustainability
- return on investment
- function
- performance.

2 Development options:

- new build
- adaptation
- alteration
- refurbishment
- relocation
- not carrying out the proposal.

3 Economic factors and resources:

- finance
- taxation
- workforce
- raw materials
- manufactured systems and components
- energy.

4 Environmental and ecological factors:

natural resources
emissions
effluent
waste
the effects of climate.

5 Stakeholder views:

client
users
community.

Learning outcomes 3 and 4:

1 Requirements:

meeting social and community obligations
meeting legal and regulatory obligations
considering significant environmental issues and effects.

2 Development options:

new build
adaptation
alteration
refurbishment
relocation
not carrying out the proposal.

3 Factors:

social
cultural
economic
political
legal
use
timescale
environmental
sustainability
accessibility
health and safety.

4 Relevant data:

baseline information
survey information
standards
legal, regulatory and policy requirements
historical.

5 Alternative solutions:

different locations
different layouts
extending the use of existing resources
use of alternative resources
changes to implementation and phasing
not carrying out the proposal.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

Simulations are considered to be acceptable for producing evidence for the following items that are considered to be rare, but key/critical to demonstrating competence. The following conditions of realism should be present:

- contingencies
 - standards and quality specifications
 - communication methods and media
 - information and data.
- 1 Records of goals and priorities identified, investigations conducted and recommendations made (ALL) [ALL]

Process Evidence: not applicable

Learning outcome 3:

Product evidence:

Simulations are considered to be acceptable for producing evidence for the following items that are considered to be rare, but key/critical to demonstrating competence. The following conditions of realism should be present:

- contingencies
 - standards and quality specifications
 - communication methods and media
 - information and data.
- 1 Reports on the impact of proposals which include collated data, selected factors and criteria, a review of alternative solutions and a forecast and assessment of the environmental impact (ALL) [ALL]

Process Evidence: not applicable

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to investigate and evaluate development options</p>	<p>1.1 identify goals and priorities for potential development</p> <p>1.2 investigate development options to meet the goals and priorities where there is a justifiable need to undertake development</p> <p>1.3 investigate and identify the design, function and performance requirements of the potential development</p> <p>1.4 investigate economic factors and resources, environmental and ecological factors, and stakeholder views that affect the future asset value and sustainability of potential development</p> <p>1.5 evaluate the best balance between the potential goals and priorities</p> <p>1.6 recommend whether and how to implement potential sustainable development so as to achieve key goals and priorities</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to investigate and evaluate development options</p>	<p>2.1 describe how to identify goals and priorities for potential development</p> <p>2.2 examine how to investigate development options to meet the goals and priorities where there is a justifiable need to undertake development</p> <p>2.3 examine how to investigate and identify the design, function and performance requirements of the potential development</p> <p>2.4 examine how to investigate economic factors and resources, environmental and ecological factors, and stakeholder views that affect the future asset value and sustainability of potential development</p> <p>2.5 evaluate the best balance between the potential goals and priorities</p> <p>2.6 propose how to recommend whether and how to implement potential sustainable development so as to achieve key goals and priorities</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to assess the environmental impact of development options</p>	<p>3.1 investigate the requirements for assessing the environmental impact of development options</p> <p>3.2 identify the factors and relevant data to be used for assessing impact</p> <p>3.3 assess and quantify the significance of each factor and suggest measures which will reduce the environmental impact</p> <p>3.4 identify and review alternative solutions which will improve environmental quality and increase sustainability</p> <p>3.5 prepare a report of the assessed environmental impact of proposals in a form suitable for public consultation</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to assess the environmental impact of development options</p>	<p>4.1 examine how to investigate the requirements for assessing the environmental impact of development options</p> <p>4.2 describe how to identify the factors and relevant data to be used for assessing impact</p> <p>4.3 examine how to assess and quantify the significance of each factor and suggest measures which will reduce the environmental impact</p> <p>4.4 describe how to identify and review alternative solutions which will improve environmental quality and increase sustainability</p> <p>4.5 explain how to prepare a report of the assessed environmental impact of proposals in a form suitable for public consultation</p>			

Learner name: _____ Date: _____

Learner signature: _____ Date: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____
(if sampled)

Unit 7: Confirm project requirements and needs in built environment design

Unit reference number: J/600/7870

QCF level: 5

Credit value: 14

Guided learning hours: 40

Unit summary

This unit is concerned with the confirmation of the project requirement, stakeholder preferences and defining and confirming the needs and expectations of users and the wider community.

It is about clarifying and agreeing project goals, priorities, functional and performance requirements and aligning these to stakeholder expectations and preferences. You must be able to clarify the project stakeholders' understanding of the project process and their respective (and potentially conflicting) goals and priorities. You will need to show how you identify the functional and performance requirements for the project and agree realistic and valid options.

It is about identifying user functional and performance requirements for a project and the options and constraints related to these. You must be able to identify user needs and consequential requirements, which may have an effect upon other stakeholders. You should be able to demonstrate the identification, assessment, presentation and agreement of suitable options.

It is about identifying community needs and expectations for a project. You must be able to identify community interests and groups, their expectations and potential reactions. You should also show how you identify and present suitable options in a manner and format which is clear and readily understandable.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Stakeholders:

- the client
- design consultants
- potential contractors
- potential subcontractors and suppliers
- independent client advisers;
- user groups.

2 Process:

- project stages
- contractual
- statutory.

3 Goals and priorities:

- quantity
- quality (including design)
- cost
- time
- development
- improvement
- use
- whole life costs
- environmental impact and sustainability
- security
- health, safety and welfare.

4 Constraints and risks:

cost
time
health and safety
the environment
client
physical
statutory.

5 Presenting:

orally
in writing
graphically
electronically.

6 Agree:

direct with a client
by negotiation and agreement with partnering team
facilitation.

Learning outcomes 3 and 4:

1 Needs:

purpose of us
location
occupancy
site access
access to services
access to transport
design quality (functionality, build quality, maintenance, impact)
space standards and requirements for spatial organisation and
relationship of functions
health and safety
environmental impact
accessibility
sustainability.

2 Identify by:

consultation with interested parties (clients, users, statutory bodies)
inspecting standard documentation and advisory material
results of comparative field research
use of benchmarking tool(s).

3 Present:

orally
in writing
graphically
electronically.

4 Stakeholders:

clients
representatives of users
statutory bodies
consultants
partners.

Learning outcomes 5 and 6:

1 What the members of the community expect, and might need:

location
scale
occupancy
significance/status
site access
access to services
legal and regulatory constraints on development and development process
project programme
environmental impact
design quality (functionality, build quality, impact, maintenance)
sustainable development
performance of transportation systems
health and safety.

2 Investigating by:

documentation
consultation
comparative field research
use of benchmarking tools.

3 Present:

orally
in writing
graphically
electronically.

4 Stakeholders:

clients
representatives of community
statutory bodies
consultants
partners.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Summaries of stakeholder goals, priorities and requirements (ALL) [ALL]
- 2 Options agreed in writing (1.4) [1.1, 1.5]

Process Evidence:

1. Presentations of the summary of requirements and preferences (1.5) [1.2, 1.6]

Learning outcome 3:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of functional and performance requirements and user needs (3.1, 3.2) [3.1, 3.2]
- 2 Records of options decided (3.3) [3.2, 3.3, 3.4]

Process Evidence:

- 1 Presentations of valid options (3.3) [3.3, 3.4]

Learning outcome 5:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Investigations into the expectations, likely reactions, requirements and preferences of members of the community (5.1, 5.2) [5.1, 5.2]
- 2 Options presented to stakeholders (3.3) [3.3, 3.4]

Process Evidence:

- 1 Presentations of options (5.3) [5.3, 5.4]

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to clarify and agree project requirements and stakeholder preferences</p>	<p>1.1 clarify stakeholders' understanding of project processes and the roles of those who need to be involved, including current and future goals and priorities</p> <p>1.2 identify the function and performance requirements for the project</p> <p>1.3 clarify the stakeholders' circumstances and requirements, the options available and the constraints and risks which might apply to the project</p> <p>1.4 challenge project requirements and stakeholders preferences which do not appear to be realistic, decide valid options and agree them in writing</p> <p>1.5 summarise and present the project requirements and stakeholders' preferences</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to clarify and agree project requirements and stakeholder preferences</p>	<p>2.1 explain how to clarify stakeholders' understanding of project processes and the roles of those who need to be involved, including current and future goals and priorities</p> <p>2.2 describe how to identify the function and performance requirements for the project</p> <p>2.3 explain how to clarify the stakeholders' circumstances and requirements, the options available and the constraints and risks which might apply to the project</p> <p>2.4 examine how to challenge project requirements and stakeholders preferences which do not appear to be realistic, decide valid options and agree them in writing</p> <p>2.5 explain how to summarise and present the project requirements and stakeholders' preferences</p>			
<p>3 Be able to define user needs</p>	<p>3.1 identify the types of user, their needs and the functions and performance requirements for the project</p> <p>3.2 identify the options available and the constraints which might apply to the project</p> <p>3.3 decide which options are valid, present them and agree them with stakeholders in writing</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
4 Understand how to define user needs	<p>4.1 describe how to identify the types of user, their needs and the functions and performance requirements for the project</p> <p>4.2 describe how to identify the options available and the constraints which might apply to the project</p> <p>4.3 evaluate how to decide which options are valid, present them and agree them with stakeholders in writing</p>			
5 Be able to define community needs	<p>5.1 identify what the members of the community expect, and might need from the project</p> <p>5.2 investigate and identify how members of the community are likely to react to the project, and what their preferences are</p> <p>5.3 decide which options are valid and realistic, present them to stakeholders in the project, and agree them in writing</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
6 Understand how to define community needs	<p>6.1 describe how to identify what the members of the community expect, and might need from the project</p> <p>6.2 examine how to investigate and identify how members of the community are likely to react to the project, and what their preferences are</p> <p>6.3 evaluate how to decide which options are valid and realistic, present them to stakeholders in the project, and agree them in writing</p>			

Learner name: _____

Date: _____

Learner signature: _____

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Assessor signature: _____

Date: _____

Internal verifier signature: _____

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(if sampled)

Unit 8: **Manage the brief, development programme and project risks and opportunities in built environment design**

Unit reference number: M/600/7877

QCF level: 6

Credit value: 14

Guided learning hours: 50

Unit summary

This unit is concerned with managing the project brief and a suitable development programme taking into account project risks and opportunities.

It covers preparing, presenting and agreeing a project brief with stakeholders. You must be able to identify and agree the stakeholder requirements, research, prepare and present the brief. Finally, you should be able to negotiate modifications to the brief after presentation to stakeholders.

It is about using the project brief to formulate a development programme which incorporates the information and constraints of the brief. You must be able to check the contents of the brief and prepare a detailed development programme which meets stakeholder's expectations.

It is about using the project information to identify, assess and manage project risks and opportunities. You must be able to obtain and review risks and opportunities and their relative significance and to identify the resources necessary to implement these processes.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Stakeholders:

- the client
- design consultants
- potential contractors
- potential subcontractors and suppliers
- user groups.

2 Requirements:

- the client
- user and accessibility
- ergonomic
- community
- procurement
- physical
- resource
- construction
- regulatory
- cost
- timescale
- risk factors
- health, safety and welfare
- environmental
- current and future needs.

3 Data:

- relevant investigations
- critical design parameters
- the scale and sensitivity of the project.

4 Analyse:

comparison with similar projects
standard checklists
reference to relevant comparative research.

5 Presenting:

orally
in writing
graphically
electronically.

Learning outcomes 3 and 4:

1 Stakeholders:

the client
design consultants
potential contractors
potential subcontractors and suppliers
user groups.

2 Information:

client requirements
user requirements
community requirements
procurement requirements
resource requirements
construction requirements
regulatory requirements
health, safety and welfare
environmental requirements
operational requirements
maintenance requirements
cost requirements
risk and value.

3 Development programme:

timetable

phasing

integration of data

interaction between design consultants

critical path

key project stages

interface between design, construction and procurement

deliverables.

4 Constraints:

work content

time duration/sequencing

resources available

contingencies

site

statutory.

5 Presenting:

orally

in writing

graphically

electronically.

6 Expectations:

specification

design quality

consultation

timetable

phasing of design development

value for money.

Learning outcomes 5 and 6:

1 Project information:

environmental
statutory and legal requirements
client, user and community requirements
construction and technical requirements
site constraints
finance, procurement and contract
quality
cost
timescale.

2 Risks and opportunities:

resources
communications
cost
quality
natural and built environment
users, public and third parties
health, safety and welfare
competence
complexity and scope
consents
business
technical considerations
timescale
contract
funding
site conditions and circumstances.

3 Manage risks:

risk identification
risk assessment
risk register
eliminate/minimise risks
control risks at source
cumulative protection
mitigate
allocation of responsibility.

4 Exploit opportunities:

innovation
plan gain
standardisation
life cycle costing
cost benefit analysis
value management
adaptation
adaptation
alteration
integration.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Scopes for draft briefs (1.1) [1.1, 1.2]
- 2 Draft briefs which include the information used and analysis of the data (1.1, 1.2, 1.3) [ALL]
- 3 Modified and detailed draft briefs based on discussions held (1.4, 1.5, 1.6) [1.1]

Process Evidence:

- 1 Presentations of the draft briefs (1.3) [1.1, 1.5]
- 2 Discussions about the wording of the brief (1.4) [1.5]

Learning outcome 3:**Product evidence:**

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of the analysis of the brief (3.1, 3.2) [3.1, 3.2, 3.3]
- 2 Outline development programmes including necessary modifications (3.3, 3.4) [3.3, 3.4]
- 3 Agreed development programmes (3.5) [3.1, 3.3, 3.5, 3.6]

Process Evidence:

- 1 Presentations of development programmes (3.5) [3.1, 3.3, 3.4, 3.6]

Learning outcome 5:**Product evidence:**

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of potential project risks identified from project information (5.1, 5.3) [5.1, 5.2]
- 2 Information on processes and opportunities relating to project risks (5.2) [5.2]
- 3 Records of methods, procedures and resources for managing risks (5.4, 5.5, 5.6, 5.7) [5.3, 5.4]

Process Evidence: not applicable

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to prepare and agree a project brief</p>	<p>1.1 identify and agree the stakeholders' requirements and prepare a scope for the project brief</p> <p>1.2 select data which is relevant and valid, analyse it and qualify its status</p> <p>1.3 prepare a draft brief clearly, accurately, unambiguously and within the time agreed, and present the brief to stakeholders</p> <p>1.4 explain and discuss any significant constraints, opportunities and areas of uncertainty</p> <p>1.5 modify the draft to reflect the discussion and relevant points which have been agreed</p> <p>1.6 negotiate a clear and mutually acceptable agreement on the brief which has sufficient detail to allow the next stage of the project to start</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to prepare and agree a project brief</p>	<p>2.1 describe how to identify and agree the stakeholders' requirements and prepare a scope for the project brief</p> <p>2.2 evaluate how to select data which is relevant and valid, analyse it and qualify its status</p> <p>2.3 explain how to prepare a draft brief clearly, accurately, unambiguously and within the time agreed, and present the brief to stakeholders</p> <p>2.4 explain and discuss any significant constraints, opportunities and areas of uncertainty</p> <p>2.5 explain how to modify the draft to reflect the discussion and relevant points which have been agreed</p> <p>2.6 propose how to negotiate a clear and mutually acceptable agreement on the brief which has sufficient detail to allow the next stage of the project to start</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to prepare a development programme which meets the requirements of the project brief</p>	<p>3.1 check and confirm with stakeholders that the information in the brief is adequate, accurate and clearly states the project development requirements</p> <p>3.2 analyse the requirements of the brief and check and clarify initial assumptions about the project development programme with stakeholders</p> <p>3.3 develop a realistic outline development programme which takes account of identified constraints</p> <p>3.4 discuss the outline development programme with stakeholders and agree any necessary modifications to the brief, outline development programme, or constraints</p> <p>3.5 prepare, present and agree a development programme which meets the requirements of the brief and the expectations of stakeholders</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to prepare a development programme which meets the requirements of the project brief</p>	<p>4.1 explain how to check and confirm with stakeholders that the information in the brief is adequate, accurate and clearly states the project development requirements</p> <p>4.2 examine how to analyse the requirements of the brief and check and clarify initial assumptions about the project development programme with stakeholders</p> <p>4.3 propose how to develop a realistic outline development programme which takes account of identified constraints</p> <p>4.4 explain how to discuss the outline development programme with stakeholders and agree any necessary modifications to the brief, outline development programme, or constraints</p> <p>4.5 explain how to prepare, present and agree a development programme which meets the requirements of the brief and the expectations of stakeholders</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>5 Be able to identify, assess and manage project risks and opportunities</p>	<p>5.1 identify and review project information relating to risks and opportunities arising from potential project processes</p> <p>5.2 obtain information on any risks and opportunities relating to the project</p> <p>5.3 identify and assess the significance of the risks and opportunities</p> <p>5.4 select the most effective methods and procedures to manage risks and exploit opportunities that comply with all relevant regulations and guidelines</p> <p>5.5 identify the resources that are necessary to implement methods to manage risks and exploit opportunities</p> <p>5.6 identify and specify clearly the procedures for implementing the management methods</p> <p>5.7 implement and maintain the management methods and procedures and modify them to meet changed circumstances</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>6 Understand how to identify, assess and manage project risks and opportunities</p>	<p>6.1 describe how to identify and review project information relating to risks and opportunities arising from potential project processes</p> <p>6.2 explain how to obtain information on any risks and opportunities relating to the project</p> <p>6.3 describe how to identify and assess the significance of the risks and opportunities</p> <p>6.4 evaluate how to select the most effective methods and procedures to manage risks and exploit opportunities that comply with all relevant regulations and guidelines</p> <p>6.5 describe how to identify the resources that are necessary to implement methods to manage risks and exploit opportunities</p> <p>6.6 describe how identify and specify clearly the procedures for implementing the management methods</p> <p>6.7 explain how to implement and maintain the management methods and procedures and modify them to meet changed circumstances</p>			

Learner name: _____
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Assessor signature: _____
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Unit 9: Form and induct a project team in built environment design

Unit reference number: A/600/7879

QCF level: 6

Credit value: 12

Guided learning hours: 40

Unit summary

This unit is about deciding what your team needs to be able to do, producing a specification for the team's selection, and ensuring that the recruitment process concludes in satisfactory contracts. You must be able to negotiate proposals for team membership, and follow the process through to the appointment of the people.

It is about briefing the project team. You must be able to agree the team's work allocation, motivate them to achieve it, and agree with them how you will monitor their performance.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Services:

- project management
- design
- specialist services.

2 Resources:

- people
- materials
- plant and equipment
- facilities.

3 Evaluate:

quality
price
value
time
reliability
competence.

4 Terms of appointment:

scope
cost
deliverables
timescale.

Learning outcomes 3 and 4:

1 Project team:

design and development consultants
potential contractors
potential subcontractors and suppliers
client.

2 Roles in:

aspects of design
health and safety
statutory and other approvals
procurement
coordination
quality assurance
team working.

3 Project programme:

key decision stages
scheduling and timetabling
delivery of development documentation
statutory approvals
development team meetings
procurement.

4 Methods of project monitor:

exchanging and coordinating information
checks and approvals
meetings
reporting.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of proposals for team membership (1.1, 1.2) [1.1, 1.2]
- 2 Evaluations of services and resources (1.3) [1.1, 1.2, 1.3]
- 3 Contracts and terms of appointment (1.4, 1.5, 1.6) [1.1, 1.2, 1.4]

Process Evidence: not applicable

Learning outcome 3:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Confirmations and agreements which describes the purpose, process and intended results of team activities including roles and responsibilities (3.1, 3.2, 3.3) [3.1, 3.2, 3.3]
- 2 Project programming and monitoring (3.4, 3.5) [3.1, 3.3, 3.4]

Process Evidence:

- 1 Discussions with the project team (3.4) [3.1, 3.3]

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to select and form a project team</p>	<p>1.1 identify the services and resources that are needed, and select those people that meet the agreed timescales and budget limits</p> <p>1.2 negotiate and recommend proposals for team membership which are likely to produce an effective team</p> <p>1.3 evaluate services and resources and circulate the results to decision makers</p> <p>1.4 follow the procedures for obtaining services and resources</p> <p>1.5 produce appropriate contractual arrangements and terms of appointment for the organisations and people selected and confirm the arrangements in writing with stakeholders</p> <p>1.6 negotiate contracts and agreements in a way which preserves goodwill and trust</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to select and form a project team</p>	<p>2.1 describe how to identify the services and resources that are needed, and select those people that meet the agreed timescales and budget limits</p> <p>2.2 propose how to negotiate and recommend proposals for team membership which are likely to produce an effective team</p> <p>2.3 evaluate services and resources and circulate the results to decision makers</p> <p>2.4 explain how to follow the procedures for obtaining services and resources</p> <p>2.5 explain how to produce appropriate contractual arrangements and terms of appointment for the organisations and people selected and confirm the arrangements in writing with stakeholders</p> <p>2.6 propose how to negotiate contracts and agreements in a way which preserves goodwill and trust</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to induct and inform a project team</p>	<p>3.1 inform the project team on the purpose, process and intended results of team activities</p> <p>3.2 confirm the roles of all the people involved in the project</p> <p>3.3 agree within the project team the allocation and control of responsibilities and pass this information on to the people who need it</p> <p>3.4 discuss and confirm the project programme with the project team</p> <p>3.5 select and specify methods of project, monitor which are suitable for the projects timescale, cost and quality, and explain the method to the project team</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to induct and inform a project team</p>	<p>4.1 explain how to inform the project team on the purpose, process and intended results of team activities</p> <p>4.2 explain how to confirm the roles of all the people involved in the project</p> <p>4.3 evaluate how to agree within the project team the allocation and control of responsibilities and pass this information on to the people who need it</p> <p>4.4 explain how to discuss and confirm the project programme with the project team</p> <p>4.5 evaluate how to select and specify methods of project, monitor which are suitable for the projects timescale, cost and quality, and explain the method to the project team</p>			

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Unit 10: Conduct condition surveys in built environment design

Unit reference number: J/600/7884

QCF level: 6

Credit value: 18

Guided learning hours: 60

Unit summary

This unit is concerned with undertaking and managing condition surveys.

It is about deciding what surveys need to be done, and drafting survey briefs along with budgets and programmes. You must have a deep knowledge of building conditions, and the skills to produce cost and time schedules for the surveys.

It is about actually doing the surveys. The 'structure' in the Element title could be a building, a highway, a bridge, a reservoir, or any load bearing or defensive construction. You must be able to organise what you need to carry out the survey, deal with contingencies, take the necessary measurements and record the results.

It is about collating the results of the survey and presenting them in a report. You must be able to demonstrate your analytical and report-writing skills, and your technical judgement (both quantitative and qualitative) concerning the condition of the structures.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Information:

photographs (including aerial photographs)
maps
charts
drawings
digital data
archive records
legal documents
client records
tenants
site owners
site managers
previous owners
local authorities
statutory authorities
public utilities
government department consultative bodies (including heritage bodies)
public and specialist libraries and archives.

2 Purpose of condition survey:

stability
purpose
value
health and safety
environmental.

3 Significant factors:

degree of urgency
gaps in information
susceptibility to damage
health and safety risk
need to inhibit deterioration
structural integrity
structural significance
impact on clients and users
third party.

Learning outcomes 3 and 4:

1 Recording:

written
graphical
electronic
photographic.

Learning outcomes 5 and 6:

1 Information - sources:

photographs (including aerial photographs)
maps
charts
drawings
digital data
archive records
legal documents
client records
tenants
site owners
site managers
previous owners
local authorities
statutory authorities
public utilities
government department consultative bodies (including heritage bodies)
public and specialist libraries and archives.

2 Analyse:

degree of urgency
gaps in information
susceptibility to damage
health and safety risk
need to inhibit deterioration
structural integrity
cultural significance
impact on clients and users
third party.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of information, briefing and significant factors which include objectives and purpose, selected methods and techniques (1.1, 1.2, 1.3, 1.4, 1.5, 1.6) [ALL]
- 2 Budgets and programmes for condition surveys (1.7, 1.8) [1.2]

Process Evidence:

- 1 Preparations and agreements for condition surveys (1.7, 1.8) [1.2]

Learning outcome 3:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of inspections which include equipment, resources and advice obtained, permissions, observations and measurements, agreed formats and conventions (3.1, 3.2, 3.3) [3.1]
- 2 Records of further investigations to identify the cause of inconsistencies and actual and potential causes of failure and deterioration (3.4, 3.5) [3.1]

Process Evidence: not applicable

Learning outcome 5:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Condition survey which includes assembling collated information using appropriate methods and techniques, analysed evidence, identified causes of failure and deterioration, level of condition and explanations (ALL) [ALL]
- 2 Records of responses to clients questions (5.6) [5.1]
- 3 Internal records (5.7) [5.1]

Process Evidence:

- 1 Responses and clarification given to clients (5.6) [5.1, 5.2]

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to recommend and agree a condition survey process</p>	<p>1.1 identify the objectives and purpose of the condition survey</p> <p>1.2 collate available information and documents and select valid, accurate and relevant information for the condition survey process</p> <p>1.3 identify and obtain necessary further information</p> <p>1.4 draft a brief for the survey including significant factors</p> <p>1.5 identify the levels and types of specialist support which will be needed and brief advisers with clear and accurate summaries of the information available</p> <p>1.6 select methods and techniques for the condition survey process which meet the requirements of relevant professional codes of practice</p> <p>1.7 prepare a budget and programme for the condition survey</p> <p>1.8 agree a budget and programme for the work</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to recommend and agree a condition survey process</p>	<p>2.1 describe how to identify the objectives and purpose of the condition survey</p> <p>2.2 explain how to collate available information and documents and select valid, accurate and relevant information for the condition survey process</p> <p>2.3 describe how to identify and obtain necessary further information</p> <p>2.4 explain how to draft a brief for the survey including significant factors</p> <p>2.5 describe how to identify the levels and types of specialist support which will be needed and brief advisers with clear and accurate summaries of the information available</p> <p>2.6 evaluate how to select methods and techniques for the condition survey process which meet the requirements of relevant professional codes of</p> <p>2.7 explain how to prepare a budget and programme for the condition survey</p> <p>2.8 evaluate how to agree a budget and programme for the work</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to inspect structures for condition</p>	<p>3.1 consult the condition survey brief and obtain the equipment and resources and specialist advice that will be needed</p> <p>3.2 check and confirm, before starting the condition survey, that people who will be affected have given their permission</p> <p>3.3 take accurate observations and measurements which are necessary for the inspection and record them clearly, accurately and completely using agreed formats</p> <p>3.4 make further investigations when observations are inconsistent with existing data and expected findings, and accurately identify the cause of inconsistencies</p> <p>3.5 consider actual and potential causes of any failure and deterioration</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to inspect structures for condition</p>	<p>4.1 explain how to consult the condition survey brief and obtain the equipment and resources and specialist advice that will be needed</p> <p>4.2 explain how to check and confirm, before starting the condition survey, that people who will be affected have given their permission</p> <p>4.3 explain how to take accurate observations and measurements which are necessary for the inspection and record them clearly, accurately and completely using agreed formats</p> <p>4.4 examine how to make further investigations when observations are inconsistent with existing data and expected findings, and accurately identify the cause of inconsistencies</p> <p>4.5 examine how consider actual and potential causes of any failure and deterioration</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>5 Be able to prepare and present condition survey reports and records</p>	<p>5.1 assemble and collate information on the condition survey</p> <p>5.2 analyse all relevant evidence and information use appropriate methods and techniques and making a realistic assessment of condition</p> <p>5.3 identify causes of probable failure and deterioration</p> <p>5.4 prepare a condition survey report which meets the requirement of the brief</p> <p>5.5 explain clearly where and why inspection and measurement may not have been possible</p> <p>5.6 answer the client's questions about the condition survey and give appropriate clarification</p> <p>5.7 maintain internal records which are clear, accurate and complete and conform to accepted professional and statutory requirements</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>6 Understand how to prepare and present condition survey reports and records</p>	<p>6.1 explain how to assemble and collate information on the condition survey</p> <p>6.2 examine how to analyse all relevant evidence and information use appropriate methods and techniques and making a realistic assessment of condition</p> <p>6.3 describe how to identify causes of probable failure and deterioration</p> <p>6.4 explain how to prepare a condition survey report which meets the requirement of the brief</p> <p>6.5 explain clearly where and why inspection and measurement may not have been possible</p> <p>6.6 explain how to answer the client's questions about the condition survey and give appropriate clarification</p> <p>6.7 explain how to maintain internal records which are clear, accurate and complete and conform to accepted professional and statutory requirements</p>			

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Unit 11: Investigate development factors and solutions in built environment design

Unit reference number: K/600/7893

QCF level: 6

Credit value: 14

Guided learning hours: 40

Unit summary

This unit is about the use and value of surveys in investigating development opportunities.

It is about deciding what your survey/investigation is for, what information you need and how it will be collected, analysed and presented. You must be able to identify a clear rationale for the survey/investigation, the required data and show how this data will be collected, either from historical existing information or from a commissioned survey.

It is about identifying data sources and evaluating that data as part of an investigation of development factors. You must be able to collect the data that you need and show how the data is analysed and evaluated. You will also be required to show how you consult appropriate professionals and existing solutions and circumstances.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Factors:

- historical
- conservation
- social
- visual and spatial
- ecological and environmental
- construction.

2 Existing information:

photographs (including aerial photographs)
maps
charts
drawings
surveys
archive records
legal documents.

3 Sources:

client records
tenants
site owners
site managers
previous owners
local authorities
statutory authorities
public utilities
government departments
public and specialist libraries and archives.

4 Survey and investigation:

visual
measured
documentary and record search
investigative research
field research.

Learning outcomes 3 and 4:

1 Survey and investigation:

visual
measured
documentary and record search
investigative research
field research.

2 Sources:

client records
tenants
site owners
site managers
previous owners
local authorities
statutory authorities
public utilities
government departments
public and specialist libraries and archives.

3 Data:

photographs
maps
charts
drawings
archive records
legal documents
surveys.

4 Factors:

historical
conservation
social
visual and spatial
ecological and environmental
construction.

5 Opportunities and constraints:

project type, purpose, location
durability
occupancy
significance/status
legal and regulatory constraints
physical and technical constraints
health and safety
anticipated development timetable
environmental quality and sustainability
standardisation.

6 Presenting:

orally
in writing
graphically
electronically.

7 Stakeholders:

client
owners
occupiers
community and special interest groups
plan authorities
regulatory authorities
public.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of a preliminary investigation which identifies the data requirements, sources and an assessment of existing information and needs (1.1, 1.2, 1.3, 1.4) [1.1, 1.2, 1.3, 1.4]
- 2 Method statements, programmes and budgets for surveys (1.5) [1.4]
- 3 Records of commissioned surveys (1.6) [1.4]

Process Evidence: not applicable

Learning outcome 3:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Evaluations of investigation data (3.1, 3.2, 3.3) [3.1, 3.2, 3.3, 3.4]
- 2 Summaries of problems directed to experts (3.4) [3.4]
- 3 Findings from investigations which include: opportunities and constraints for project development options; previous solutions; factors; implications for each development option; supporting data (3.5, 3.6, 3.7, 3.8, 3.9) [3.3, 3.4, 3.6, 3.7]

Process Evidence:

- 1 Presentations of the evaluation report (3.7) [3.4, 3.6, 3.7]

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to identify survey and investigation requirements</p>	<p>1.1 identify the factors for survey and investigation which may be significant for the planned development</p> <p>1.2 analyse and assess how accurate, up to date and complete the existing information is, and decide what additional information is needed</p> <p>1.3 identify what data is needed, its source, how accurate the data needs to be and what data outputs are required from surveys and investigations</p> <p>1.4 make a preliminary investigation to identify any access problems and equipment which will be needed, and assess the implications for the measured survey</p> <p>1.5 develop a clear and accurate method statement, a programme and a budget for the survey, and agree them with the stakeholders</p> <p>1.6 commission measured surveys by selecting people and organisations who are competent to do the work</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to identify survey and investigation requirements</p>	<p>2.1 describe how to identify the factors for survey and investigation which may be significant for the planned development</p> <p>2.2 examine how to analyse and assess how accurate, up to date and complete the existing information is, and decide what additional information is needed</p> <p>2.3 describe how to identify what data is needed, its source, how accurate the data needs to be and what data outputs are required from surveys and investigations</p> <p>2.4 examine how to make a preliminary investigation to identify any access problems and equipment which will be needed, and assess the implications for the measured survey</p> <p>2.5 propose how to develop a clear and accurate method statement, a programme and a budget for the survey, and agree them with the stakeholders</p> <p>2.6 evaluate how to commission measured surveys by selecting people and organisations who are competent to do the work</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to investigate and evaluate development factors, likely problems and potential solutions</p>	<p>3.1 choose methods and techniques for the survey and investigation which are valid, reliable, consistent with legal requirements and which recognise concerns raised by the public</p> <p>3.2 identify sources of information and collect and collate relevant data</p> <p>3.3 accurately analyse and evaluate the investigation data which has been collected about all of the significant trends and factors affecting the project development</p> <p>3.4 consult with experts on specific problems which are relevant to the investigation by providing them with an accurate summary of the problems</p> <p>3.5 identify and accurately record the opportunities and constraints for project development options</p> <p>3.6 identify and assess previous solutions which are similar to the current circumstances to see whether they are relevant and useful</p> <p>3.7 present accurate findings which are unambiguous, which clearly describe all the important factors, and which detail the implications for each development option, and in a format which is suitable for circulation and discussion with stakeholders</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>3.8 state clearly the authority for assumptions and projections used in the report</p> <p>3.9 assemble any supporting data which is relevant to the study, but which is not included in the report, store it safely and index it clearly for future reference</p>			
<p>4 Understand how to investigate and evaluate development factors, likely problems and potential solutions</p>	<p>4.1 evaluate how to choose methods and techniques for the survey and investigation which are valid, reliable, consistent with legal requirements and which recognise concerns raised by the public</p> <p>4.2 describe how to identify sources of information and collect and collate relevant data</p> <p>4.3 examine how to accurately analyse and evaluate the investigation data which has been collected about all of the significant trends and factors affecting the project development</p> <p>4.4 explain how to consult with experts on specific problems which are relevant to the investigation by providing them with an accurate summary of the problems</p> <p>4.5 describe how to identify and accurately record the opportunities and constraints for project development options</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>4.6 describe how to identify and assess previous solutions which are similar to the current circumstances to see whether they are relevant and useful</p> <p>4.7 explain how to present accurate findings which are unambiguous, which clearly describe all the important factors, and which detail the implications for each development option, and in a format which is suitable for circulation and discussion with stakeholders</p> <p>4.8 explain how to state clearly the authority for assumptions and projections used in the report</p> <p>4.9 explain how to assemble any supporting data which is relevant to the study, but which is not included in the report, store it safely and index it clearly for future reference</p>			

Learner name: _____ Date: _____

Learner signature: _____ Date: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____
(if sampled)

Unit 12: Specify, manage and analyse testing in built environment design

Unit reference number: T/600/7900

QCF level: 6

Credit value: 16

Guided learning hours: 60

Unit summary

This unit is concerned with managing tests which will be carried out by other people. The wide ranges in this unit give learners a broad variety of tests from which to select their evidence.

It is about deciding what tests need commissioning, and drafting test specifications. You must have a deep knowledge of the categories of tests which may be needed, and be competent at drafting specifications and commissioning the tests.

It is about getting the tests carried out, and being responsible for them. You must be able to prepare a plan for the testing, and ensure that the tests are carried out to programme and within budget.

It is about presenting the test results and sharing the information. You must be able to evaluate the test results, integrate them into a competent report, and present the report to the stakeholders.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Object:

geological

structural

environmental

material.

2 Purpose:

performance
routine
contingency.

3 Nature:

physical
condition
performance
destructive
non-destructive
qualitative
quantitative.

4 Desk study:

client
owners
occupiers
statutory authorities
research institutions
advisory bodies
libraries
archives
validated research data
legal documents.

5 Data outputs:

visual
approximate estimated
detailed assessment of specified features.

6 Resources:

materials
people
equipment
time.

Learning outcomes 3 and 4:

1 Processes:

as defined by relevant legislation

code of practice as accepted by recognised authorities in the field.

2 Methods:

visual

approximate estimated

detailed assessment of specified features.

3 Object:

geographical

structural

environmental

material.

4 Purpose:

performance

routine

contingency.

5 Nature

physical

condition

performance

destructive

non-destructive

qualitative

quantitative.

6 Contract and legal requirements:

health and safety legislation

contract conditions

environmental legislation.

7 Resources:

materials

people

equipment

time.

8 Permission from:

client
site owner and occupiers
occupiers
adjoining owners and occupiers
notifiable authorities.

9 Health and safety requirements:

personal safety equipment and clothing
safe use of access equipment (including ladders, tower scaffolds, hydraulic hoists - as required under health and safety legislation)
industry codes of practice and regulations apply to the test location and the tests being conducted
as identified by risk assessments.

10 Plans - will include:

risk assessment
arrangements for waste disposal
deal with contingencies.

11 Test requirements:

physical
condition
performance.

Learning outcomes 5 and 6:

1 Methods of analysis:

comparison with standard test results
referenced to accepted scientific/engineering principles and analytical practice.

2 Presenting:

orally
in writing
graphically
electronically.

3 Stakeholders:

client
owners
occupiers
regulatory authorities
designers
partners.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of preliminary investigations which identifies: significant factors; the data requirements and purpose; an assessment of existing information; additional information needed; an assessment of access requirements; and equipment needed (1.1, 1.2, 1.3, 1.4) [1.1, 1.2, 1.4, 1.5]
- 2 Specifications, criteria, programmes the assessment(s) of resources (1.5) [1.6]
- 3 Records of commissioned tests and selected people (1.6) [1.1]

Process Evidence: not applicable

Learning outcome 3:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Plans for tests which include: test processes and methods selected; an estimate of resources; permissions obtained; quality assurance and safety standards (3.1, 3.2, 3.3, 3.4, 3.5) [ALL]
- 2 Records of test monitoring and recommended modifications (3.6) [3.10, 3.11]

Process Evidence: not applicable

Learning outcome 5:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Analysis charts of test results with a commentary and interpretation (5.1, 5.2, 5.3) [5.1]
- 2 Reports of the test findings including the constraints, opportunities, feasibility, analyses, commentary and presentation (5.4, 5.5) [5.2, 5.3]

Process Evidence:

- 1 Presentations of the report and commentary (5.5) [5.2, 5.3]
- 2 The interpretation of the test data (5.2) [5.1]

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to identify, specify and commission tests in construction</p>	<p>1.1 identify factors which may be significant to the object, purpose and nature of the test by desk study</p> <p>1.2 analyse and assess how accurate, up to date and complete the existing information is</p> <p>1.3 identify what data is needed, how accurate the data needs to be and what data outputs are required</p> <p>1.4 make a preliminary investigation to identify any access requirements and equipment which will be needed, and assess and summarise the implications</p> <p>1.5 develop a clear and accurate specification, and criteria, a programme and assessment of resources for the testing programme, and agree them with the stakeholders</p> <p>1.6 commission tests selecting competent people and organisations to do the work</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to identify, specify and commission tests in construction</p>	<p>2.1 describe how to identify factors which may be significant to the object, purpose and nature of the test by desk study</p> <p>2.2 examine how to analyse and assess how accurate, up to date and complete the existing information is</p> <p>2.3 describe how to identify what data is needed, how accurate the data needs to be and what data outputs are required</p> <p>2.4 examine how to make a preliminary investigation to identify any access requirements and equipment which will be needed, and assess and summarise the implications</p> <p>2.5 propose how to develop a clear and accurate specification, and criteria, a programme and assessment of resources for the testing programme, and agree them with the stakeholders</p> <p>2.6 evaluate how to commission tests select competent people and organisations to do the work</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to plan and manage tests</p>	<p>3.1 select relevant processes and methods which are reliable, valid, consistent with the test object, purpose and nature and the location, contract and legal requirements and which recognise concerns raised by the public</p> <p>3.2 estimate and justify the resources which will be involved in conducting and reporting on the tests</p> <p>3.3 ask for and obtain permission to carry out the test from people who might be affected and from any legal authorities who have to be notified</p> <p>3.4 evaluate how to choose suitable quality assurance standards and specify health and safety requirements</p> <p>3.5 prepare a plan for the test and schedule it to meet the requirements of the test</p> <p>3.6 manage and monitor tests and recommend modifications to maintain compliance with test requirements</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to plan and manage tests</p>	<p>4.1 evaluate how to select relevant processes and methods which are reliable, valid, consistent with the test object, purpose and nature and the location, contract and legal requirements and which recognise concerns raised by the public</p> <p>4.2 examine how to estimate and justify the resources which will be involved in conducting and reporting on the tests</p> <p>4.3 explain how to ask for and obtain permission to carry out the test from people who might be affected and from any legal authorities who have to be notified</p> <p>4.4 evaluate how to choose suitable quality assurance standards and specify health and safety requirements</p> <p>4.5 explain how to prepare a plan for the test and schedule it to meet the requirements of the test</p> <p>4.6 evaluate how to manage and monitor tests and recommend modifications to maintain compliance with test requirements</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>5 Be able to analyse and present test results</p>	<p>5.1 collect and verify the results from tests</p> <p>5.2 process the results use the most appropriate methods of analysis and chart them in a format which will help people to interpret them</p> <p>5.3 produce a clear and accurate commentary and interpretation of the results</p> <p>5.4 use the test results, analysis and commentary findings to produce an accurate report which identifies the development constraints, opportunities and feasibility, and circulate the report to stakeholders</p> <p>5.5 present the report clearly and in a format which is suitable for the stakeholders who need to use the findings</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
6 Understand how to analyse and present test results	<p>6.1 explain how to collect and verify the results from tests</p> <p>6.2 explain how to process the results use the most appropriate methods of analysis and chart them in a format which will help people to interpret them</p> <p>6.3 explain how to produce a clear and accurate commentary and interpretation of the results</p> <p>6.4 explain how to use the test results, analysis and commentary findings to produce an accurate report which identifies the development constraints, opportunities and feasibility, and circulate the report to stakeholders</p> <p>6.5 explain how to present the report clearly and in a format which is suitable for the stakeholders who need to use the findings</p>			

Learner name: _____ Date: _____

Learner signature: _____ Date: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____
(if sampled)

Unit 13: Establish regulatory requirements and secure consents in built environment design

Unit reference number: Y/600/7906

QCF level: 6

Credit value: 16

Guided learning hours: 60

Unit summary

This unit is concerned with dealing with regulatory requirements and statutory consents and minimising their impact upon a development.

It is about identifying the regulations and also the constraints which might apply to a project. In order to provide the necessary evidence for this element, you must be able to show how to identify potential constraints and evaluate the impact they would have upon the project.

It is about meeting development requirements and also dealing with constraints. You must be able show how to match potential solutions and options to requirements or constraints and to present these to stakeholders in a clear, objective and readable format.

It is about preparing and processing applications for statutory consent. You must be able show how to identify what consent is needed, where and when it is needed and how to submit clear, valid timely applications. You should also be able to show how applications can be negotiated in order to ensure consent.

It is about submitting appeals following refused applications. You must be able show how you have prepared and submitted an appeal by providing the necessary evidence.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Investigation methods and techniques:

standard document search
comparative field research
client and user consultation
discussion with regulatory and statutory bodies and local authorities
commissioning investigations by specialists.

2 Key factors:

infrastructure issues
land use
physical development
environmental considerations
timetable
financing.

3 Regulations about:

development and use of land
structures
buildings and highways
renewal and clearance
health, safety and welfare
transport infrastructure
environment
conservation
access (eg DDA).

Learning outcomes 3 and 4:

1 Regulatory Constraints:

development and use of land
structures
buildings and highways
renewal and clearance
health, safety and welfare
transport infrastructure
environment
conservation
access (eg DDA).

2 Requirements and preferences for:

infrastructure issues
land use
physical development
environmental impact
timetable
financing
sustainability
maintenance.

3 Stakeholders:

the client
owners
occupiers
community and special interest groups
plan authorities
civic and historical societies
regulatory authorities (eg heritage bodies)
public enquiries.

4 Advice provided:

orally
in writing
use graphics
electronically.

Learning outcomes 5 and 6:

1 Aspects of the project:

development and use of land
structures
buildings and highways
renewal and clearance
health, safety and welfare
transport infrastructure
environment
conservation
access (eg DDA).

2 Consents:

plan
building control
environmental
utilities.

3 Alternatives:

amending the brief
amending the proposal
appealing
withdrawing the application.

Learning outcomes 7 and 8:

1 Appeal against a refusal to grant consent for:

development and use of land
structures
buildings and highways
renewal and clearance
health, safety and welfare
transport infrastructure
environment
conservation
access (eg DDA).

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

Simulations are considered to be acceptable for producing evidence for the following items that are considered to be rare, but key/critical to demonstrating competence. The following conditions of realism should be present:

- contingencies
 - standards and quality specifications
 - communication methods and media
 - information and data.
- 1 Records of the methods and techniques to be used (1.1) [1.1]
 - 2 Summaries of legislative requirements and constraints which include preferred options; relative importance of existing and anticipated regulations; explanations of the appeals procedures; assessments of regulatory flexibility (1.2, 1.3, 1.4, 1.5) [1.2, 1.3]

Process Evidence: not applicable

Learning outcome 3:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Reports of the investigation findings which identifies the options available and include existing solutions; requirements and preferences; valid options and objections; matching to legislation and guidance; advice (3.1, 3.2, 3.3, 3.4, 3.6) [3.1, 3.2, 3.3]
- 2 Supporting data indexed (3.5)

Process Evidence:

- 1 Advice provided on the findings and implications of the investigation (3.6) [3.3, 3.4]

Learning outcome 5:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records which identifies which aspects of projects are subject to statutory controls and will need consents (5.1) [5.1]
- 2 Records of checks made with authorities about the requirements, current procedures and likely timescale for statutory approvals and other consents (5.2) [5.1]
- 3 Records of information circulated to stakeholders which contains a forecast of the time needed for the submission and approval of applications for consent and the implications of delays, failure to apply for and achieve consent (5.3, 5.4) [5.1, 5.2, 5.3]
- 4 Applications for consent, including information provided on request and negotiations (5.5, 5.6, 5.7, 5.8) [5.1, 5.2]
- 5 Records of alternatives agreed in anticipation of approval being refused (5.9) [5.3]

Process Evidence: not applicable

Learning outcome 7:

Product evidence:

Simulations are considered to be acceptable for producing evidence for the following items that are considered to be rare, but key/critical to demonstrating competence. The following conditions of realism should be present:

- contingencies
 - standards and quality specifications
 - communication methods and media
 - information and data.
- 1 Appeals against a refusal to grant a consent (7.1, 7.2, 7.3) [7.1]
 - 2 Records of appeal negotiations (7.4) [7.1]
 - 3 Records of proposals which have been changed following the results of appeals (7.5) [7.1]

Process Evidence:

1 Appeal negotiations (7.4) [7.1]

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to identify, evaluate and confirm project regulatory requirements and constraints</p>	<p>1.1 choose investigation methods and techniques which are valid, reliable, consistent with legal requirements and which identify the feasibility of the project</p> <p>1.2 identify the requirements and preferred options of plan and other regulatory bodies which have an interest in key factors of the project</p> <p>1.3 identify and assess the relative importance of existing and anticipated regulations</p> <p>1.4 identify and review opportunities and constraints on project options which could result from both existing and anticipated regulations</p> <p>1.5 summarise any regulatory constraints which might affect the viability of the project and explain the procedures for appealing against negative decisions</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to identify, evaluate and confirm project regulatory requirements and constraints</p>	<p>2.1 explain how to choose investigation methods and techniques which are valid, reliable, consistent with legal requirements and which identify the feasibility of the project</p> <p>2.2 describe how to identify the requirements and preferred options of plan and other regulatory bodies which have an interest in key factors of the project</p> <p>2.3 describe how to identify and assess the relative importance of existing and anticipated regulations</p> <p>2.4 describe how to identify and review opportunities and constraints on project options which could result from both existing and anticipated regulations</p> <p>2.5 explain how to summarise any regulatory constraints which might affect the viability of the project and explain the procedures for appealing against negative decisions</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to report and advise on options for potential developments</p>	<p>3.1 identify and assess existing solutions which appear to satisfy the regulatory constraints which may apply to the development</p> <p>3.2 investigate and test the requirements and preferences of planning and other regulatory bodies which have an interest in key development factors and report valid options and objections to the stakeholders</p> <p>3.3 match findings which have legal implications to relevant legislation and related guidance</p> <p>3.4 produce an accurate and unambiguous report based on the investigation findings which clearly identifies the options available</p> <p>3.5 assemble any supporting data which is relevant to the investigation, but which is not included in the report, store it safely and index it clearly for future reference</p> <p>3.6 provide clear and accurate advice on the findings and implications of the investigation to stakeholders</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to report and advise on options for potential developments</p>	<p>4.1 describe how to identify and assess existing solutions which appear to satisfy the regulatory constraints which may apply to the development</p> <p>4.2 examine how to investigate and test the requirements and preferences of planning and other regulatory bodies which have an interest in key development factors and report valid options and objections to the stakeholders</p> <p>4.3 propose how to match findings which have legal implications to relevant legislation and related guidance</p> <p>4.4 explain how to produce an accurate and unambiguous report based on the investigation findings which clearly identifies the options available</p> <p>4.5 explain how to assemble any supporting data which is relevant to the investigation, but which is not included in the report, store it safely and index it clearly for future reference</p> <p>4.6 explain how to provide clear and accurate advice on the findings and implications of the investigation to stakeholders</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>5 Be able to prepare and process applications to secure statutory consents</p>	<p>5.1 identify which aspects of the project are subject to statutory controls and will need consents</p> <p>5.2 check and confirm with the relevant authorities the requirements, current procedures and likely timescale for statutory approvals and other consents</p> <p>5.3 forecast how long the submission and approval of applications for consent will take and how this will fit in with the project schedule</p> <p>5.4 identify the implications of delays, failure to apply for and achieve consent and circulate the information to the stakeholders</p> <p>5.5 prepare and assemble the information that will be needed for the application</p> <p>5.6 prepare and submit a clear and valid application for the consent</p> <p>5.7 provide the consent authorities with additional clear, relevant and accurate information when it is requested</p> <p>5.8 manage negotiations with statutory authorities to secure consents</p> <p>5.9 plan and agree alternatives with the client in anticipation of approval being refused</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>6 Understand how to prepare and process applications to secure statutory consents</p>	<p>6.1 describe how to identify which aspects of the project are subject to statutory controls and will need consents</p> <p>6.2 explain how to check and confirm with the relevant authorities the requirements, current procedures and likely timescale for statutory approvals and other consents</p> <p>6.3 examine how to forecast how long the submission and approval of applications for consent will take and how this will fit in with the project schedule</p> <p>6.4 describe how to identify the implications of delays, failure to apply for and achieve consent and circulate the information to the stakeholders</p> <p>6.5 explain how to prepare and assemble the information that will be needed for the application</p> <p>6.6 explain how to prepare and submit a clear and valid application for the consent</p> <p>6.7 explain how provide the consent authorities with additional clear, relevant and accurate information when it is requested</p> <p>6.8 evaluate how to manage negotiations with statutory authorities to secure consents</p> <p>6.9 propose how to plan and agree alternatives with the client in anticipation of approval being refused</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>7 Be able to prepare and process appeals and negotiate to secure statutory consent</p>	<p>7.1 identify, within the appeal period, whether there are grounds for a formal appeal against a refusal to grant consent</p> <p>7.2 evaluate the strengths and weaknesses of the application</p> <p>7.3 prepare an appropriate appeal based on clearly specified grounds, and submit it in the proper form and within the time allowed</p> <p>7.4 present a justifiable case supporting the appeal in negotiations with statutory authorities</p> <p>7.5 agree changes to proposals following the results of appeals</p>			
<p>8 Understand how to prepare and process appeals and negotiate to secure statutory consent</p>	<p>8.1 describe how to identify, within the appeal period, whether there are grounds for a formal appeal against a refusal to grant consent</p> <p>8.2 evaluate how to evaluate the strengths and weaknesses of the application</p> <p>8.3 explain how to prepare an appropriate appeal based on clearly specified grounds, and submit it in the proper form and within the time allowed</p> <p>8.4 explain how to present a justifiable case supporting the appeal in negotiations with statutory authorities</p> <p>8.5 evaluate how to agree changes to proposals following the results of appeals</p>			

Learner name: _____
Learner signature: _____
Assessor signature: _____
Internal verifier signature: _____
(if sampled)

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Date: _____
Date: _____
Date: _____

Unit 14: Manage project information in built environment design

Unit reference number: K/600/7912

QCF level: 5

Credit value: 12

Guided learning hours: 40

Unit summary

This unit is concerned with setting up and managing systems for controlling the documentary information for design projects. "Documents" include all project information, whether in electronic or hard copy form.

It is about deciding what documents will be needed, and how they will be managed. You must be able to specify what you need, develop a production programme, set up a monitor-and-control system, and agree all this with the project team.

It is about managing your information system to ensure a successful project. You must be able to demonstrate that the documents meet the needs of the project at all times, resolve problems, modify the systems when necessary, and keep relevant parties informed.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Purpose:

- agree designs
- to obtain consents
- procurement
- contract
- production.

2 Scope:

number
type
format
size.

3 Documents:

forms of contract
specifications
drawings
bills of quantities
schedules
health and safety plans
accounts
claims.

4 Systems:

incoming and outgoing drawing and document registers
records of document approval and revision
production instructions
reporting procedures
revision management
scheduling of work
type of measurement
methods of coordination (eg common arrangement)
model documents and standards
integration of interdisciplinary data
electronic data transfer.

5 Decision makers:

the client
consultants
potential contractors
potential sub-contractors and suppliers.

6 Criteria:

format
presentation
accuracy
technical content
completeness
referencing
cross referencing and correlation with associated documents
status.

Learning outcomes 3 and 4:

1 Systems:

incoming and outgoing drawing and document registers
records of document approval and revision
reporting procedures
revision management
scheduling of work
type of measurement
methods of coordination (eg common arrangement)
model documents and standards
integration of interdisciplinary data
electronic data transfers
production instructions.

2 Documents:

forms of contract
specifications
drawings
bills of quantities
schedules
health and safety plans
accounts
claims.

3 Information:

design brief
design information from earlier stages
design information from others
surveys
reports
statutory approvals and requirements
cost estimates
standards and codes of practice
technical literature.

4 Criteria:

format
presentation
accuracy
technical content
completeness
referencing
cross referencing and correlation with associated documents
status.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Specifications of project document control requirements, including purpose and scope and systems for monitoring and controlling (1.1, 1.4) [1.1, 1.2, 1.3, 1.4]
- 2 Document production programmes including resources and targets (1.2, 1.3) [1.1, 1.2, 1.3]
- 3 Records of criteria for checking, approving and integrating documents (1.5) [1.3, 1.5, 1.6]

Process Evidence: not applicable

Learning outcome 3:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of information which has been obtained, evaluated and assessed (3.1, 3.2, 3.3, 3.4) [3.1, 3.2, 3.3]
- 2 Records of collated and evaluated documents (3.5) [3.2]
- 3 Recommendations for changes to the brief, design, specification and contract based on discrepancies which have been identified (3.6, 3.7) [3.3]
- 4 Records of collated design information which has been distributed including briefings given to stakeholders and the people responsible for producing documents (3.8) [3.2, 3.3]
- 5 Records showing where alternative methods of producing documents have been chosen (3.11) [3.2]
- 6 Records showing checks and approvals obtained (3.9) [3.4]
- 7 Records of information on progress which has been circulated (3.10) [3.2, 3.3]

Process Evidence: not applicable

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Be able to specify project document requirements	<p>1.1 specify the purpose and scope of documents</p> <p>1.2 develop a programme for producing documents, which meets the needs of the project</p> <p>1.3 specify resources and targets to achieve the document production programme</p> <p>1.4 set up systems for monitoring and controlling the production of documents</p> <p>1.5 develop and agree with decision makers the criteria for check, approving and integrating documents</p>			
2 Understand how to specify project document requirements	<p>2.1 evaluate how to specify the purpose and scope of documents</p> <p>2.2 propose how to develop a programme for producing documents, which meets the needs of the project</p> <p>2.3 evaluate how to specify resources and targets to achieve the document production programme</p> <p>2.4 propose how to set up systems for monitoring and controlling the production of documents</p> <p>2.5 explain how to develop and agree with decision makers the criteria for check, approving and integrating documents</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to integrate and evaluate project information</p>	<p>3.1 implement systems for monitoring and controlling the production of documents</p> <p>3.2 obtain and evaluate the available information to see whether it is adequate to meet the needs of the project</p> <p>3.3 assess the status of the information and pass it on to people who need it, indicating any special considerations and limitations on its use</p> <p>3.4 collaborate with the project team to achieve integrated project design information</p> <p>3.5 collate documents when they have been produced and evaluate them against the agreed criteria</p> <p>3.6 identify queries, discrepancies and inconsistencies in the information and resolve them with the project team</p> <p>3.7 recommend changes to the brief, design, specification and contract when the discrepancies which have been identified suggest that modifications are needed</p> <p>3.8 collate late revisions, requirements and additions to the design information, distribute the information promptly and brief the stakeholders and the people responsible for producing documents</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>3.9 obtain necessary checks to and approvals of documents when they are needed</p> <p>3.10 produce up-to-date and accurate information on progress and circulate it to the people who need the information</p> <p>3.11 choose alternative methods for producing documents if it is not possible to produce them in house</p>			
<p>4 Understand how to integrate and evaluate project information</p>	<p>4.1 explain how to implement systems for monitoring and controlling the production of documents</p> <p>4.2 explain how to obtain and evaluate the available information to see whether it is adequate to meet the needs of the project</p> <p>4.3 examine how to assess the status of the information and pass it on to people who need it, indicating any special considerations and limitations on its use</p> <p>4.4 examine how to collaborate with the project team to achieve integrated project design information</p> <p>4.5 explain how to collate documents when they have been produced and evaluate them against the agreed criteria</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>4.6 describe how to identify queries, discrepancies and inconsistencies in the information and resolve them with the project team</p> <p>4.7 propose how to recommend changes to the brief, design, specification and contract when the discrepancies which have been identified suggest that modifications are needed</p> <p>4.8 explain how to collate late revisions, requirements and additions to the design information, distribute the information promptly and brief the stakeholders and the people responsible for producing documents</p> <p>4.9 explain how to obtain necessary checks to and approvals of documents when they are needed</p> <p>4.10 explain how to produce up-to-date and accurate information on progress and circulate it to the people who need the information</p> <p>4.11 evaluate how to choose alternative methods for producing documents if it is not possible to produce them in house</p>			

Learner name: _____
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Assessor signature: _____
Internal verifier signature: _____
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Unit 15: Prepare specifications in built environment design

Unit reference number: M/600/7913

QCF level: 6

Credit value: 14

Guided learning hours: 40

Unit summary

This unit is concerned with the drafting of specification for designs.

It covers methods of specifications, derived from standard sources and modified as necessary. These describe how the finished products should be constructed. You must be able to decide what sources are suitable, modify them where necessary, check the coherence and consistency of the finished drafts, and have them verified.

It covers performance specifications, which describe how the finished product should perform in use. You must know what you want, be able to draft a suitable document, and ensure that it is checked and verified.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Type of specification:

original document
National Specification systems
elemental and trade.

2 Project requirements:

to obtain consents
procurement
contract
production.

3 Source information:

design information
statutory regulations
EU and British Standards
codes of practice
technical literature.

4 Verification:

format
presentation
accuracy
technical content
completeness
referencing
cross-referencing and correlation with associated documents
status
current.

5 Referenced against:

Standard methods of measurement
Common Arrangement
CI/SfB.

Learning outcomes 3 and 4:

1 Type of performance specification:

original document
National Building Specification (NBS)
industry/practice standards
elements, trade, building
phase.

2 Purpose of documents:

to obtain consents
procurement
contract
production.

3 Source information:

design information
statutory regulations
British Standards
codes of practice
technical literature.

4 Referenced against:

SMM
Common Arrangement
CI/SfB.

5 Invalid because of:

format
presentation
inaccuracy
technical content
incompleteness
referencing
cross-referencing and correlation with associated documents
status.

6 Checks and approvals:

format
presentation
accuracy
technical content
completeness
referencing
cross-referencing and correlation with associated documents
status.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

Simulations are considered to be acceptable for producing evidence for the following items which are considered to be rare, but key/critical to demonstrating competence. The following conditions of realism should be present:

- contingencies
 - standards and quality specifications
 - communication methods and media
 - information and data.
- 1 Prescriptive specifications which includes: purpose; consistency checks; formatted sections; identified source information; design requirements (ALL) [ALL]

Process Evidence: not applicable

Learning outcome 3:

Product evidence:

Simulations are considered to be acceptable for producing evidence for the following items which are considered to be rare, but key/critical to demonstrating competence. The following conditions of realism should be present:

- contingencies
 - standards and quality specifications
 - communication methods and media
 - information and data.
- 1 Performance specifications which includes: purpose; consistency checks; identified source information; detailed design objectives and functional performance requirements criteria; methods of assessment and verification; data used for calculations; references and cross-reference; checks and approvals (ALL) [ALL]

Process Evidence: not applicable

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to prepare prescriptive design specifications</p>	<p>1.1 select a type of specification document which is suitable for the project requirements</p> <p>1.2 structure the specification to suit the circumstances and requirements of the project</p> <p>1.3 produce a specification which is based on identified, current source information which has been verified</p> <p>1.4 select, and where necessary amend, technical clauses from standard sources, which define the quality, type and standard of the materials, components and finished work</p> <p>1.5 format the specification so that it is concise, referenced and cross-referenced accurately</p> <p>1.6 check that the specification is consistent with the current design and other design documentation, and update it promptly and accurately when the design changes</p> <p>1.7 obtain necessary verification for the content and presentation of specifications</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to prepare prescriptive design specifications</p>	<p>2.1 evaluate how to select a type of specification document which is suitable for the project requirements</p> <p>2.2 explain how to structure the specification to suit the circumstances and requirements of the project</p> <p>2.3 explain how to produce a specification which is based on identified, current source information which has been verified</p> <p>2.4 evaluate how to select, and where necessary amend, technical clauses from standard sources, which define the quality, type and standard of the materials, components and finished work</p> <p>2.5 explain how to format the specification so that it is concise, referenced and cross-referenced accurately</p> <p>2.6 explain how to check that the specification is consistent with the current design and other design documentation, and update it promptly and accurately when the design changes</p> <p>2.7 explain how to obtain necessary verification for the content and presentation of specifications</p>			
<p>3 Be able to prepare performance specifications</p>	<p>3.1 select a type of performance specification document which is suitable for the purpose</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>3.2 check that the specification is consistent with design and related documents, where separate, and that it does not include duplicate and contradictory information</p> <p>3.3 produce a specification which conforms with identified, applicable, current source information</p> <p>3.4 identify where the current source information is invalid and obtain accurate and valid supplementary information</p> <p>3.5 identify, analyse and detail the design objectives and appropriate functional performance requirements</p> <p>3.6 define appropriate performance criteria, methods of assessment and verification</p> <p>3.7 include with the specification the data used to calculate the performance requirements</p> <p>3.8 structure the specification so that it is concise, referenced and cross-referenced accurately</p> <p>3.9 check that the specification is consistent with the current design and other design documentation, and update it promptly and accurately when the design changes</p> <p>3.10 obtain necessary checks and approvals for the content and presentation of specifications</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to prepare performance specifications</p>	<p>4.1 evaluate how to select a type of performance specification document which is suitable for the purpose</p> <p>4.2 describe how to check that the specification is consistent with design and related documents, where separate, and that it does not include duplicate and contradictory information</p> <p>4.3 explain how to produce a specification which conforms with identified, applicable, current source information</p> <p>4.4 describe how to identify where the current source information is invalid and obtain accurate and valid supplementary information</p> <p>4.5 describe how to identify, analyse and detail the design objectives and appropriate functional performance requirements</p> <p>4.6 evaluate how to define appropriate performance criteria, methods of assessment and verification</p> <p>4.7 explain how to include with the specification the data used to calculate the performance requirements</p> <p>4.8 explain how to structure the specification so that it is concise, referenced and cross-referenced accurately</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>4.9 explain how to check that the specification is consistent with the current design and other design documentation, and update it promptly and accurately when the design changes</p> <p>4.10 explain how to obtain necessary checks and approvals for the content and presentation of specifications</p>			

Learner name: _____

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Learner signature: _____

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Assessor signature: _____

Date: _____

Internal verifier signature: _____

Date: _____

(if sampled)

Unit 16: Obtain and select tenders in built environment design

Unit reference number: H/600/7925

QCF level: 6

Credit value: 12

Guided learning hours: 50

Unit summary

This unit is concerned with obtaining tenders from contractors and subcontractors, selecting the ones that you wish to accept, and negotiating contracts. The words 'estimate', 'bid' and 'tender' are all used in the industry, and are taken here to be synonymous.

It is about selecting those whom you seek tenders and confirming that they will be bidding. You must know about the bidders and their capabilities; and you must be able to decide on the selection criteria, evaluate the bids when they come in, and make recommendations accordingly.

It is about preparing the tender documents and sending them out to the bidders. You must have a deep knowledge of what they will be bidding for, and you must be able to deal with any queries, problems and drop-outs during the tender period.

It is about evaluating the bids received, choosing the one that you wish to accept, and negotiating the details so that a contract can be signed. You must be able to spot the key aspects of the bids, evaluate them against your selection criteria, choose the bid which is the client's or your best interest, and finalise all the details, subject to contract.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Type of tender:

open competitive
two stage
selected list
negotiated
partnering.

2 Tenderers:

contractors
sub/works/trade contractors
suppliers
consultants.

3 Requirements:

competitive tendering
international (including European Union)
in house
national
local
statutory
client.

4 Evidence:

documentary
references
interview.

5 Selection criteria:

quality and delivery record
perceived added value (including reputation of potential contractors)
acceptability of known sub-contracting arrangements
acceptability to client
financial resources
references from previous clients and bankers
health and safety
competence of people
resources (human, materials, facilities)
insurance
environmental policy and management.

Learning outcomes 3 and 4:

1 Tender:

open competitive
two stage
selected list
negotiated
partnering.

2 Tender documents:

invitation to tender
form of tender
returns procedure
surveys
specifications
drawings
schedules
bills of quantities
health and safety plans
scope of services
terms and conditions
schedules of rates.

3 Tenderers:

contractors
sub/works/trade contractors
suppliers
consultants.

4 Queries and information about:

price
quantity
quality
standards
carriage and delivery
completion
maintenance
after sales service
method of payment
terms of payment
contract conditions
survey information
time
contractual
administrative
technical.

5 Amendments:

change to tender period
changes resulting from queries.

Learning outcomes 5 and 6:

1 Legal requirements:

statutes
regulations, including EU regulations
codes of practice and procedure.

2 Appropriate action:

accept for evaluation
invite clarification or amendment
reject.

3 Criteria:

- quality
- technical viability
- programme
- cost (budgets, rates)
- loading and cash flow
- policies which offer added value
- comparative criteria (eg price indices, databases, trade journals, pre-tender estimates)
- organisational policies
- legal requirements
- competence of people.

4 Variations, adjustments and corrections:

- price
- quantity
- quality
- standards
- carriage and delivery
- completion
- maintenance
- after sales service
- method of payment
- terms of payment
- contract conditions
- scope of service
- terms and conditions.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of tender enquiries sent to potential tenderers (1.1, 1.2, 1.3, 1.7) [1.2, 1.4]
- 2 Evaluations of tenderers including advice and information provided (1.4, 1.5, 1.6, 1.7) [1.2, 1.3]

Process Evidence: not applicable

Learning outcome 3:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Tender documents (3.1) [3.1, 3.2]
- 2 Records of tender documents issued including amendments and queries (3.2, 3.3, 3.4, 3.5, 3.6, 3.7) [ALL]

Process Evidence: not applicable

Learning outcome 5:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Evaluations of selected tenders against criteria and checks that the project team can meet the obligations of the contract (5.1, 5.3, 5.4) [5.1, 5.2, 5.3]
- 2 Records of negotiations including variations, adjustments and corrections agreed (5.5) [5.4]
- 3 Records of notifications to tenderers (5.6) [5.2]
- 4 Records showing repeated tender processes (5.7) [5.2]

Process Evidence: not applicable

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to evaluate and select potential tenderers</p>	<p>1.1 select an appropriate type of tender and decide which potential tenderers could meet the contract specification</p> <p>1.2 decide how many tenderers to invite, taking into account the value, size, type and requirements of the contract</p> <p>1.3 send tender enquiries to potential tenderers, in accordance with contract requirements, and invite them to provide evidence about their experience, capability and resources</p> <p>1.4 choose selection criteria which are suitable to weight and rate performance for the type of work described in the tender</p> <p>1.5 evaluate potential tenderers, who respond to the invitation, against the selection criteria, place them in rank order and choose the number needed</p> <p>1.6 offer advice and information to decision makers about potential tenderers and the selection criteria and modify the tender list to reflect any changes which are agreed</p> <p>1.7 confirm that the selected tenderers are willing to tender and add more potential tenderers from the evaluation list where necessary</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to evaluate and select potential tenderers</p>	<p>2.1 evaluate how to select an appropriate type of tender and decide which potential tenderers could meet the contract specification</p> <p>2.2 describe how decide how many tenderers to invite, taking into account the value, size, type and requirements of the contract</p> <p>2.3 explain how to send tender enquiries to potential tenderers, in accordance with contract requirements, and invite them to provide evidence about their experience, capability and resources</p> <p>2.4 evaluate how to choose selection criteria which are suitable to weight and rate performance for the type of work described in the tender</p> <p>2.5 evaluate potential tenderers, who respond to the invitation, against the selection criteria, place them in rank order and choose the number needed</p> <p>2.6 propose how to offer advice and information to decision makers about potential tenderers and the selection criteria and modify the tender list to reflect any changes which are agreed</p> <p>2.7 explain how to confirm that the selected tenderers are willing to tender and add more potential tenderers from the evaluation list where necessary</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to obtain estimates, bids and tenders</p>	<p>3.1 prepare tender documents which meet statutory regulations, codes of practice and the organisations policies</p> <p>3.2 issue tender documents to all the tenderers on the agreed list, following the agreed procedures</p> <p>3.3 respond to queries from tenderers promptly and pass on any additional information which they need</p> <p>3.4 investigate any errors, omissions and ambiguities which are reported by tenderers and amend the tender documents to correct them</p> <p>3.5 pass on to all the tenderers the information given to an individual tenderer, and amendments to tender documents</p> <p>3.6 keep accurate records of tender documents issued, feedback, queries and information from tenderers</p> <p>3.7 agree and implement action when tenderers withdraw from the process</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to obtain estimates, bids and tenders</p>	<p>4.1 explain how to prepare tender documents which meet statutory regulations, codes of practice and the organisations policies</p> <p>4.2 explain how to issue tender documents to all the tenderers on the agreed list, following the agreed procedures</p> <p>4.3 explain how to respond to queries from tenderers promptly and pass on any additional information which they need</p> <p>4.4 examine how to investigate any errors, omissions and ambiguities which are reported by tenderers and amend the tender documents to correct them</p> <p>4.5 explain how to pass on to all the tenderers the information given to an individual tenderer, and amendments to tender documents</p> <p>4.6 explain how to keep accurate records of tender documents issued, feedback, queries and information from tenderers</p> <p>4.7 evaluate how to agree and implement action when tenderers withdraw from the process</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>5 Be able to assess and select successful tenders and negotiate changes</p>	<p>5.1 store the tenders received in a secure place and open them at the agreed date and time in line with the organisation's procedures and legal requirements</p> <p>5.2 review the tenders against the criteria for acceptance, including checking for discrepancies, omissions and errors, and take appropriate action</p> <p>5.3 evaluate the tenders which are accepted against the agreed criteria and choose the tender which best meets the criteria</p> <p>5.4 check that the project team can meet the obligations of the contract and recommend a preferred tender to the client</p> <p>5.5 negotiate and agree any variations, adjustments and corrections with the successful tenderer and confirm them in writing, subject to contract</p> <p>5.6 accept the successful tender formally and politely notify tenderers who have been unsuccessful, about the result</p> <p>5.7 modify and repeat the tendering process if it has been unsuccessful</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>6 Understand how to assess and select successful tenders and negotiate changes</p>	<p>6.1 explain how to store the tenders received in a secure place and open them at the agreed date and time in line with the organisation's procedures and legal requirements</p> <p>6.2 examine how to review the tenders against the criteria for acceptance, including checking for discrepancies, omissions and errors, and take appropriate action</p> <p>6.3 evaluate how to evaluate the tenders which are accepted against the agreed criteria and choose the tender which best meets the criteria</p> <p>6.4 explain how to check that the project team can meet the obligations of the contract and recommend a preferred tender to the client</p> <p>6.5 propose how to negotiate and agree any variations, adjustments and corrections with the successful tenderer and confirm them in writing, subject to contract</p> <p>6.6 evaluate how to accept the successful tender formally and politely notify tenderers who have been unsuccessful, about the result</p> <p>6.7 explain how to modify and repeat the tendering process if it has been unsuccessful</p>			

Learner name: _____
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Assessor signature: _____
Internal verifier signature: _____
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Unit 17: Prepare and submit tenders in the built environment

Unit reference number: A/600/7932

QCF level: 6

Credit value: 20

Guided learning hours: 70

Unit summary

This unit is concerned with designers working with contractors and consultants and securing contracts with clients to carry out the design for construction and installation work. The words 'estimate', 'bid' and 'tender' are all used in the industry, and are taken here to be synonymous.

It is about scrutinising the tender enquiries received, and deciding whether or not to bid and what to do if you are going to bid. You must be able to 'get to the bottom' of an enquiry quickly, and you must have a good knowledge of your organisation's capabilities, its business plan, workload and the state of the market.

It is about deciding how the job will be done. You must be able to get all the information that you need, decide the best way of working, produce a method statement, and agree this with the project team.

It is about deciding how much the work will cost. You must be able to turn your method statement into a working programme, decide what resources you need, calculate the costs, and discuss them with the project team.

It is about turning your cost estimate into a final bid which will be competitive in the marketplace. You must be able to assess the risks and opportunities that the work presents, and assemble the bid to give you the best chance of success. This will include ways of making your bid more attractive than those of your competitors.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Points of concern:

- incomplete enquiry information
- inconsistent with the policy of the organisation
- discrepancies within enquiry information
- unclear enquiry information
- tender procedure requirements
- quantitative requirements
- qualitative requirements.

2 Tender documents - type:

- invitation to tender
- form of tender
- returns procedure
- survey reports
- specifications
- drawings
- schedules
- bills of quantities
- health and safety plans
- scope of services
- terms and conditions
- schedule of rates.

3 Agreed organisational criteria:

financial
viability of tendering information
current workload
type of work
competence of people
timescale
social policies
environmental impact
location
potential completion
resources
risk
contractual
legal.

Learning outcomes 3 and 4:

1 Project data:

contractual obligations and scope and scale of works
specifications
detailed drawings
health and safety plans.

2 Construction, installation and work methods:

sequencing and integration of work operations
construction and installation techniques
prefabrication and standardisation
working conditions (health, safety and welfare)
new materials and technologies.

3 Relevant sources:

project team and supply chain
regulatory authorities
technical/trade literature
standard lists and procedures
investigative research.

4 Technical criteria:

materials and components performance and availability
structural forms
heating and cooling
energy use
occupancy
health, safety and welfare
fire protection
access
plant and equipment performance; and availability
availability of people and skills
transportation; traffic generation and management
local ecology
emissions and pollution risk
waste
seasonal weather conditions
sustainability
buildability
demolition
site conditions.

5 Project criteria:

cost/value
conformity to statutory requirements
client and user needs
contract requirements in terms of time, quantity and quality
benchmarking.

Learning outcomes 5 and 6:

1 Project requirements:

construction
installation and maintenance work
supply of goods and materials
consultancy services
invitation to tender
form of tender
technology required
procedures for submitting tenders.

2 Phasing:

plan
design
procurement
construction.

3 Estimate:

cost based on a quotation
unit cost built up from basic data
internal and historical cost data
published cost data.

4 Resources - type:

people (in-house, external)
plant and equipment
materials
finance
time
supply options.

5 External factors:

variations over time
location
statutory and contractual requirements
special working conditions and methods
resourcing conditions
competition.

Learning outcomes 7 and 8:

1 Risks and opportunities:

environmental
financial and market
political
technical
health and safety
reputation
competence of people.

2 Alternatives and qualifications:

specifications and materials
methods of construction
services
time-scales
supply options
price offer options.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Evaluations of tender documents which include tender details and requirements, points of concern, assessment of capability to meet the requirements, contractual and legal issues, conclusions (ALL) [ALL]

Simulations are not considered to be acceptable for producing evidence for this Element.

Process Evidence: not applicable

Learning outcome 3:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Evaluations of work methods which include assessments of project data, information from relevant sources, identified work methods, technical and project criteria (3.1, 3.2, 3.3, 3.4) [3.1, 3.2, 3.3, 3.4, 3.5]
- 2 Records of recommended work methods (3.5) [3.2]
- 3 Method statements (3.6) [3.2]

Process Evidence: not applicable

Learning outcome 5:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Plan of works and draft programmes (5.1) [5.1]
- 2 Estimates of resources (5.2, 5.3, 5.4, 5.5) [5.2, 5.3, 5.4, 5.5]
- 3 Payment schedules (5.6) [5.4]

Process Evidence: not applicable

Learning outcome 7:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Tender offers (ALL) [ALL]

Simulations are not considered to be acceptable for producing evidence for this Element.

Process Evidence:

- 1 Presentations and support of tender offers which include evaluations of risks and opportunities, specified alternatives, profit margin, payment schedule (7.6) [7.2]

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Be able to review tender enquiry documentation	1.1 confirm and summarise the tender requirements for design services 1.2 investigate the tender documents within budgets and tender time limits 1.3 identify any points of concern in the tender documents and seek clarification and resolution 1.4 evaluate the tender documents against agreed organisational criteria and assess whether the organisation should decide 1.5 keep information about tender enquiries in confidence and only pass it on to people who have the authority to receive it			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to review tender enquiry documentation</p>	<p>2.1 explain how to confirm and summarise the tender requirements for design services</p> <p>2.2 examine how to investigate the tender documents within budgets and tender time limits</p> <p>2.3 describe how to identify any points of concern in the tender documents and seek clarification and resolution</p> <p>2.4 evaluate the tender documents against agreed organisational criteria and assess whether the organisation should decide</p> <p>2.5 explain how to keep information about tender enquiries in confidence and only pass it on to people who have the authority to receive it</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to evaluate and select work methods</p>	<p>3.1 assess the available project data and summarise it to enable decisions on construction, installation and work methods to be made</p> <p>3.2 obtain more information from relevant sources in cases where the available project data is insufficient</p> <p>3.3 identify work methods which will make the best use of resources and which meet project, statutory and contractual requirements</p> <p>3.4 evaluate the methods against relevant technical and project criteria and select the one which best meets the technical criteria</p> <p>3.5 recommend the selected method to decision makers and encourage them to adopt it</p> <p>3.6 prepare an outline method statement which is accurate, clear, concise and acceptable to all the people involved</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to evaluate and select work methods</p>	<p>4.1 examine how to assess the available project data and summarise it to enable decisions on construction, installation and work methods to be made</p> <p>4.2 explain how to obtain more information from relevant sources in cases where the available project data is insufficient</p> <p>4.3 describe how to identify work methods which will make the best use of resources and which meet project, statutory and contractual requirements</p> <p>4.4 evaluate the methods against relevant technical and project criteria and select the one which best meets the technical criteria</p> <p>4.5 propose how to recommend the selected method to decision makers and encourage them to adopt it</p> <p>4.6 explain how to prepare an outline method statement which is accurate, clear, concise and acceptable to all the people involved</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>5 Be able to estimate the resource requirements and costs within a tender</p>	<p>5.1 develop a proposed plan of work and draft programme which meet the tender project requirements and phasing</p> <p>5.2 estimate what resources will be needed, their sources, availability and costs</p> <p>5.3 modify the costs to take into account any external factors which may affect the cost projections</p> <p>5.4 produce the overall estimate of costs and check that it is complete, accurate and in a form which is suitable for a judgement to be made</p> <p>5.5 explain and clarify the calculations to support the projected costs</p> <p>5.6 recommend payment schedules which will meet proposed resource usage</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>6 Understand how to estimate the resource requirements and costs within a tender</p>	<p>6.1 propose how to develop a proposed plan of work and draft programme which meet the tender project requirements and phasing</p> <p>6.2 examine how to estimate what resources will be needed, their sources, availability and costs</p> <p>6.3 explain how to modify the costs to take into account any external factors which may affect the cost projections</p> <p>6.4 explain how to produce the overall estimate of costs and check that it is complete, accurate and in a form which is suitable for a judgement to be made</p> <p>6.5 explain how to explain and clarify the calculations to support the projected costs</p> <p>6.6 propose how to recommend payment schedules which will meet proposed resource usage</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>7 Be able to finalise and submit a tender offer</p>	<p>7.1 identify and evaluate, the risks and opportunities involved in a successful tender offer</p> <p>7.2 identify and specify alternatives and qualifications to the original tender requirements which may improve the organisations ability to carry out the work</p> <p>7.3 apply a profit margin and payment schedule which meets the objectives and strategy of the organisation</p> <p>7.4 adjust the tender offer to take account of market conditions</p> <p>7.5 check that the tender offer is complete and accurate and conforms to house style, and make any necessary modifications</p> <p>7.6 present and support the tender offer in a manner which maximises its acceptability</p> <p>7.7 collate, arrange and submit tender offer information in accordance with tender instructions</p> <p>7.8 collect together all the tender offer information, record it, store it securely and only pass it on to people who have the authority to receive it</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>8 Understand how to finalise and submit a tender offer</p>	<p>8.1 describe how to identify and evaluate, the risks and opportunities involved in a successful tender offer</p> <p>8.2 describe how to identify and specify alternatives and qualifications to the original tender requirements which may improve the organisations ability to carry out the work</p> <p>8.3 explain how to apply a profit margin and payment schedule which meets the objectives and strategy of the organisation</p> <p>8.4 explain how to adjust the tender offer to take account of market conditions</p> <p>8.5 explain how to check that the tender offer is complete and accurate and conforms to house style, and make any necessary modifications</p> <p>8.6 explain how to present and support the tender offer in a manner which maximises its acceptability</p> <p>8.7 explain how to collate, arrange and submit tender offer information in accordance with tender instructions</p> <p>8.8 explain how to collect together all the tender offer information, record it, store it securely and only pass it on to people who have the authority to receive it</p>			

Learner name: _____
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Assessor signature: _____
Internal verifier signature: _____
(if sampled)

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Unit 18: Prepare and agree forms of contract in the built environment

Unit reference number: J/600/7934

QCF level: 6

Credit value: 13

Guided learning hours: 70

Unit summary

This unit is concerned with procuring the services of contractors and subcontractors. This could be a contract between your contractor and your organisation, or between the contractor and your client, or between your organisation and your client.

It is about drafting a contract suitable for the project in hand. You must have an understanding of the standard forms of contract and how to amend them; and you must be able to prepare draft contracts and have them approved.

It is about striking the deal which is best for all parties involved. You must have a good knowledge of contract procedure and of the current and relevant issues; and you must be able to negotiate fairly and confidently with the contractor.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Contracts - type:

- main contract
- sub-contract
- lump sum
- design and construct
- schedule based
- prime cost based
- firm priced
- labour and materials
- labour only
- fluctuating price
- goods and material supply only
- service contracts.

2 Form of procurement:

- open competitive
- two stage
- selected list
- negotiated
- partnering.

3 Amending and drafting:

- allocation of risks and responsibilities
- structure of contract
- key instructions
- legal factors.

Learning outcomes 3 and 4:

1 Contracts requirements - relating to:

- main contract
- sub-contract
- lump sum
- design and construct
- schedule based
- prime cost based
- firm price
- fluctuating price
- labour and materials
- labour only
- goods and material supply only
- service contracts.

2 People involved in the contract:

- clients
- main contractors
- sub-contractors
- consultants
- third parties.

3 Amendments:

- allocation of risks and responsibilities
- structure of contract
- key instructions
- legal factors.

4 Legal requirements:

- statutes
- regulations, including European Union regulations
- codes of practice and procedure
- common law.

5 Contract documents:

invitation to tender
forms of tender
specifications
survey reports
drawings and schedules
bills of quantities/ schedules of rates
health and safety plans
scope of services
terms and conditions.

6 Obligations:

insurances
bonds
warranties
statutory
financial guarantees
competence of people
deliverables.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Standard forms of contract, contract clauses and documents which include amendments suitable for the form of procurement particulars and preliminaries, appendices (1.1, 1.2, 1.3, 1.4) [ALL]
- 2 Non-standard clauses and drafted documents (1.5, 1.6) [1.1, 1.3]
- 3 Records of expert advice and explanation (1.5) [1.1, 1.3]

Process Evidence: not applicable

Learning outcome 3:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of contract negotiations (3.1, 3.2, 3.3) [3.1, 3.2, 3.3, 3.4]
- 2 Contract documents (3.3, 3.4, 3.6) [3.1, 3.2, 3.4, 3.5]
- 3 Written proof of ability of parties to meet contract obligations (3.5) [3.1, 3.6]

Process Evidence: not applicable

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to prepare and modify standard forms of contract</p>	<p>1.1 confirm the standard form of contract, contract clauses and documents appropriate for the form of procurement proposed</p> <p>1.2 amend standard forms of contract so that the clauses and documents are suitable for the form of procurement proposed</p> <p>1.3 draft particulars and preliminaries which accurately describe the needs of all the people involved in the form of contract</p> <p>1.4 check that contract clauses, appendices and amendments meet statutory requirements</p> <p>1.5 obtain expert advice on the implications of drafting non-standard clauses and explain why this is necessary to the people involved in the contract</p> <p>1.6 obtain necessary checks and approvals for the draft forms of contract</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to prepare and modify standard forms of contract</p>	<p>2.1 explain how to confirm the standard form of contract, contract clauses and documents appropriate for the form of procurement proposed</p> <p>2.2 explain how to amend standard forms of contract so that the clauses and documents are suitable for the form of procurement proposed</p> <p>2.3 explain how to draft particulars and preliminaries which accurately describe the needs of all the people involved in the form of contract</p> <p>2.4 explain how to check that contract clauses, appendices and amendments meet statutory requirements</p> <p>2.5 explain how to obtain expert advice on the implications of drafting non-standard clauses and explain why this is necessary to the people involved in the contract</p> <p>2.6 explain how to obtain necessary checks and approvals for the draft forms of contract</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to negotiate and agree a contract</p>	<p>3.1 negotiate contracts using a style and manner which maintains good long term relationships with all the people involved in the contract</p> <p>3.2 negotiate and agree the most equitable position, contract terms, conditions and amendments</p> <p>3.3 record the results of negotiations accurately and pass the information on, promptly and in accordance with legal requirements, to all the people involved in the contract</p> <p>3.4 prepare accurate copies of the final contract documents, check that they meet legal requirements and arrange for them to be signed</p> <p>3.5 identify the obligations of the parties to the contract and obtain valid, written proof that they are able to meet the obligations</p> <p>3.6 check that all the contract documents are complete, accurate and stored securely</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to negotiate and agree a contract</p>	<p>4.1 propose how to negotiate contracts using a style and manner which maintains good long term relationships with all the people involved in the contract</p> <p>4.2 propose how to negotiate and agree the most equitable position, contract terms, conditions and amendments</p> <p>4.3 explain how to record the results of negotiations accurately and pass the information on, promptly and in accordance with legal requirements, to all the people involved in the contract</p> <p>4.4 explain how prepare accurate copies of the final contract documents, check that they meet legal requirements and arrange for them to be signed</p> <p>4.5 describe how to identify the obligations of the parties to the contract and obtain valid, written proof that they are able to meet the obligations</p> <p>4.6 explain how to check that all the contract documents are complete, accurate and stored securely</p>			

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Assessor signature: _____
Internal verifier signature: _____
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Unit 19: Control projects in the built environment

Unit reference number: Y/600/7937

QCF level: 6

Credit value: 22

Guided learning hours: 80

Unit summary

This unit applies to designers who go onto site and become involved in the construction process.

It is about ensuring the quality of the work activities. You must be able to specify what standards of quality you require to set up systems for carrying out the work activities to the agreed standards, deal with contingencies and non-compliance, and to gather feedback to identify which activities can be improved.

It is about working to programme. You must be able to set up systems for monitoring progress, to deal with resource problems, delays and disruptions, and continually seek ways of improving progress.

It is about controlling costs and making payments. You must be able to set up cost control systems; deal with variations; identify cost savings; and issue instructions and certificates.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Quality standards:

- statutory requirements
- project specifications
- British Standards
- International Standards
- Codes of Practice
- organisation standards
- trade advisory guidance and best practice
- benchmarks.

2 People responsible:

the client
contractors
consultants
sub-contractors
suppliers.

3 Processes:

visual inspection
comparison with design requirements
comparison with standard documentation
check manufacturers documentation
check materials supply
sampling and mock-ups
testing
site inspection reports
contractors reports
site meetings.

4 Work:

materials and components and their use
methods of construction.

Learning outcomes 3 and 4:

1 Systems to monitor and record:

visual inspection
resource records
site inspection reports
contractors' reports
certified payments
written, graphical and electronic records of actual work against
programmed work
site meetings
organisational procedures
management reports
benchmarks
comparison with project requirements.

2 Programmes:

bar charts
network analysis
critical path
project expenditure forecasts.

3 Resources:

people
plant and equipment
materials and components
finance
time
specialist services
public utility services
information.

4 People responsible:

the client
contractors
consultants
sub-contractors
suppliers.

5 Quantifying:

method study
work study
production analysis.

6 Deviations:

resource shortages
design problems and constraints
industrial disputes
lack of essential construction information
construction errors
inclement weather
physical (site) constraints
legal
social
environmental
force majeure.

7 Corrective action:

restore progress in accordance with agreed programme
agree new completion dates
initiate contract claim
securing additional resources
altering planned work.

Learning outcomes 5 and 6:

1 Quantities and cost data:

materials
completed work
dayworks
periodic valuations
retention sums
forecasts of expenditure.

2 Contracts requirements:

main contract
sub-contract
lump sum
design and construct
schedule based
prime cost based
firm price
fluctuating price
labour and materials
labour only
goods and material supply only
service contracts.

3 Appropriate action:

agree cost changes
agree quality changes
agree programme changes.

4 Opportunities for cost savings:

waste reduction
resource management and logistics
applications of new technologies and materials
energy management
recycling/re-use materials
alternative sources and types of materials
revisions in quality
standardisation.

5 People responsible:

the client
contractors
consultants
sub-contractors
suppliers.

6 Instructions and certificates:

instruction
non-conformance
dayworks
interim certificate
statement of retention
notification to nominated subcontractor
revision to completion date
partial possession
schedule of defects
making good defects
practical completion/final notice
final certificate.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of identified quality standards and specified responsibilities (1.1, 1.2) [1.1, 1.2]
- 2 Records of systems for inspection and control which include checks, work failing requirements and corrective action (1.3, 1.4, 1.5) [1.1, 1.3, 1.4]
- 3 Records of information referred to others which includes variations in quality standards, programme and safety implications, specifications which conflict with statutory and legal requirements, recommended improvements from feedback, amendments to contract quality requirements and specifications (1.6, 1.7, 1.8, 1.9) [1.1, 1.2, 1.3]

Process Evidence:

- 1 Identifying work which fails to meet the requirements (1.5) [1.1, 1.4]

Learning outcome 3:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Progress monitoring and recording systems (3.1) [3.1, 3.2]
- 2 Records of identified and quantified deviations which include investigated inadequately and inappropriately specified resources, specified alternative resources and agreed corrective action (3.2, 3.3, 3.4) [3.2, 3.3, 3.4, 3.5, 3.6, 3.7]
- 3 Records of information and recommendations about progress passed to decision makers which include options likely to minimise increases in cost and time, changes, resource needs, suggested decisions and improvements from feedback (3.4, 3.5, 3.6, 3.7) [3.3, 3.6, 3.7]

Process Evidence: not applicable

Learning outcome 5:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Contract cost control systems which include records of quantities and cost data collection, calculations, quantities and cost data (5.1, 5.2) [5.1, 5.2]
- 2 Records of appropriate action which include identified and investigated variations (5.3) [5.2, 5.3, 5.4]
- 3 Records of systems and processes for identifying opportunities for cost-savings which have been developed and implemented, and work checks and inspections (5.4, 5.5) [5.2, 5.4, 5.5]
- 4 Records of instructions, notices and certificates (5.6, 5.7) [5.5, 5.6]

Process Evidence: not applicable

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to control contract(s) against agreed quality standards</p>	<p>1.1 identify and interpret quality standards from available information and pass them to people responsible for their implementation, before they start work</p> <p>1.2 specify, clearly and unambiguously, the responsibilities which individuals have for maintaining quality standards</p> <p>1.3 set up processes for inspecting and controlling the quality of work and record the outcomes</p> <p>1.4 check, regularly, that work conforms to the design requirements and the specified quality standards</p> <p>1.5 identify work which fails to meet the requirements and specified quality standards and implement corrective action</p> <p>1.6 inform people responsible about significant variations in quality standards, programme and safety implications, and suggest the decisions which they need to make and the actions they need to take</p> <p>1.7 identify specifications which conflict with statutory and legal requirements and refer them to people responsible for modification</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>1.8 identify improvements from feedback received and recommend them to people responsible</p> <p>1.9 agree amendments to the contract quality requirements and specifications and record them accurately</p>			
<p>2 Understand how to control contract(s) against agreed quality standards</p>	<p>2.1 describe how to identify and interpret quality standards from available information and pass them to people responsible for their implementation, before they start work</p> <p>2.2 evaluate how to specify, clearly and unambiguously, the responsibilities which individuals have for maintaining quality standards</p> <p>2.3 propose how to set up processes for inspecting and controlling the quality of work and record the outcomes</p> <p>2.4 explain how to check, regularly, that work conforms to the design requirements and the specified quality standards</p> <p>2.5 describe how to identify work which fails to meet the requirements and specified quality standards and implement corrective action</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>2.6 explain how to inform people responsible about significant variations in quality standards, programme and safety implications, and suggest the decisions which they need to make and the actions they need to take</p> <p>2.7 describe how to identify specifications which conflict with statutory and legal requirements and refer them to people responsible for modification</p> <p>2.8 describe how to identify improvements from feedback received and recommend them to people responsible</p> <p>2.9 evaluate how to agree amendments to the contract quality requirements and specifications and record them accurately</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to control contract progress against agreed programmes</p>	<p>3.1 develop and implement systems to monitor and record the progress of the contract against the agreed programmes</p> <p>3.2 identify inadequately and inappropriately specified resources, inform people responsible and specify and obtain alternative resources</p> <p>3.3 identify and quantify any deviations from planned progress which have occurred, or which may occur, and which could disrupt the programme</p> <p>3.4 investigate the circumstances of any deviations thoroughly and agree and implement appropriate corrective action</p> <p>3.5 recommend options which are most likely to minimise increases in cost and time and help the contract progress, and pass these on to people responsible</p> <p>3.6 regularly inform people responsible about progress, changes to the operational programme, resource needs, and suggest the decisions and actions that need to be taken</p> <p>3.7 identify improvements from feedback received and recommend them to people responsible</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to control contract progress against agreed programmes</p>	<p>4.1 propose how to develop and implement systems to monitor and record the progress of the contract against the agreed programmes</p> <p>4.2 describe how to identify inadequately and inappropriately specified resources, inform people responsible and specify and obtain alternative resources</p> <p>4.3 describe how to identify and quantify any deviations from planned progress which have occurred, or which may occur, and which could disrupt the programme</p> <p>4.4 examine how to investigate the circumstances of any deviations thoroughly and agree and implement appropriate corrective action</p> <p>4.5 propose how recommend options which are most likely to minimise increases in cost and time and help the contract progress, and pass these on to people responsible</p> <p>4.6 explain how to regularly inform people responsible about progress, changes to the operational programme, resource needs, and suggest the decisions and actions that need to be taken</p> <p>4.7 describe how to identify improvements from feedback received and recommend them to people responsible</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>5 Be able to control contract costs and issue certification</p>	<p>5.1 develop and implement appropriate contract quantities and cost control systems which are able to provide early warning of problems</p> <p>5.2 ensure that accurate quantities and cost data is calculated and presented in an agreed format to the people responsible</p> <p>5.3 identify and investigate any variations thoroughly and agree and implement appropriate action with people responsible</p> <p>5.4 develop and implement systems and processes for identify opportunities for cost savings and recommend them to people responsible</p> <p>5.5 inspect and check work against the contract requirements, record any variations and review for a certification decision to be made</p> <p>5.6 issue appropriate certificates and notices, in accordance with the terms of the contract requirements, and within the time agreed, and justify and support certification decisions with valid evidence</p> <p>5.7 check that the people involved in the contract are complying with instructions and certificates and the contract requirements and enforce the terms of the contract requirements in cases of non-compliance</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>6 Understand how to control contract costs and issue certification</p>	<p>6.1 propose how to develop and implement appropriate contract quantities and cost control systems which are able to provide early warning of problems</p> <p>6.2 explain how to ensure that accurate quantities and cost data is calculated and presented in an agreed format to the people responsible</p> <p>6.3 describe how to identify and investigate any variations thoroughly and agree and implement appropriate action with people responsible</p> <p>6.4 propose how develop and implement systems and processes for identifying opportunities for cost savings and recommend them to people responsible</p> <p>6.5 examine how to inspect and check work against the contract requirements, record any variations and review for a certification decision to be made</p> <p>6.6 explain how to issue appropriate certificates and notices, in accordance with the terms of the contract requirements, and within the time agreed, and justify and support certification decisions with valid evidence</p> <p>6.7 explain how to check that the people involved in the contract are complying with instructions and certificates and the contract requirements and enforce the terms of the contract requirements in cases of non-compliance</p>			

Learner name: _____
Learner signature: _____
Assessor signature: _____
Internal verifier signature: _____
(if sampled)

Date: _____
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Unit 20: Manage project completion and handover in the built environment

Unit reference number: H/600/7522

QCF level: 6

Credit value: 15

Guided learning hours: 40

Unit summary

This unit applies to designers who are engaged in projects at site level at the handover stage and who are responsible for completing projects and formally handing them over to their clients.

It is about specifying what information and guidance the users will need; getting this material produced; and training the users accordingly. You will need to have a deep knowledge of the project, and also have access to the necessary detailed information. You will need drafting, editing and training skills. You may choose to delegate the detailed work to others, but then you will be responsible for their performance.

It is about completing the snagging activities, overseeing the commissioning, and managing the contractual documentation. You will need to have good organisational and interpersonal skills, as well as giving attention to technical detail.

It is about the final step in the "learning cycle" - systematically gathering the intelligence that the project has yielded, reviewing the information and deciding how future projects can benefit from this evaluation. You will need to have good analytical and planning skills, and the necessary leadership skills to carry your team with you.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Information and guidance:

record drawings
schedules
specifications
contract records
photographs
trade literature
statutory consents
commissioning and test certificates
operating instructions and performance ratings
guarantees
warranties
Health and Safety File
energy
certificates.

2 Guidance - about:

the design approach
construction and installation details
key references
statutory and other limitations on use
health and safety aspects
operating installations
maintenance guidance
sources of replacement materials, components and equipment
spare parts
environmental and sustainability aspects
future demolition and decommissioning.

3 Works and installations - features:

structure
materials
finishes
furnishings
fittings
power and light
heating and ventilating
telecommunications
movement of goods and people
special services and equipment
external works
landscaping.

4 Information - produced by:

consultants
contractors
sub-contractors
suppliers and manufacturers.

5 Guidance material:

user's manuals
log books
maintenance schedules.

Learning outcomes 3 and 4:

1 Project requirements:

time
quality
cost
health and safety
regulations
sustainability
defects liability period.

2 Stakeholders:

clients
users
consultants
contractors
regulatory authorities.

3 Responsibilities:

insurances
security
operations
health and safety
utility supply
environmental sustainability.

4 Works, installations and operational documentation:

manuals and guidance materials
plans
health and safety file
operating equipment
security information and equipment
certificates and warranties
services.

Learning outcomes 5 and 6:

1 Improvements from feedback:

management procedures
client, design and construction team performance
working arrangements
formal and informal communications
quality assurance and control
design and technical appraisal
operational appraisal
performance in use
benchmarking
post project review.

2 Those involved with the project:

the design team
specialist consultants
the client
contractors
site inspectorate
users
manage agents.

3 Feedback information:

approved providers
contract documentation
design documentation
organisational documentation
standard details
specifications
product information
government and statutory publications
research and advisory data
periodicals and abstracts.

4 Methods and sources:

project records and documentation
site inspections
scientific research and data
studies of performance in use
meetings
questionnaires
reports.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Specifications for information and guidance needed (1.1) [1.1, 1.3]
- 2 Information and guidance produced and provided (1.2, 1.3, 1.4) [1.1, 1.2, 1.3, 1.4, 1.5]
- 3 Records of explanations given (1.5) [1.1]

Process Evidence:

- 1 Demonstrations to, and training of clients and users (1.5) [1.1, 1.3]

Learning outcome 3:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Commissioning programmes (2.1) [2.1, 2.2]
- 2 Records of checks on project requirements, certification requirements, and completion of outstanding work and defects (3.2, 3.3, 3.4) [3.1, 3.2]
- 3 Records of handover which include inspections, confirmed concerns and actions, adopted responsibilities, documentation (3.5, 3.6, 3.7) [3.2, 3.3, 3.4]

Process Evidence:

- 1 Handover inspection (2.5) [2.2]

Learning outcome 5:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of promotion of and agreement on, obtaining and making improvements from feedback (5.1, 5.2, 5.3) [5.1, 5.2, 5.3, 5.4]
- 2 Records of obtained feedback information which includes investigation, assessment, review and summarised recommendations for improvements (5.4, 5.5, 5.6) [5.1, 5.3, 5.4]
- 3 Records of improvements classified into procedures and databases and promoted (5.7, 5.8) [5.1]

Process Evidence: not applicable

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to provide information and guidance on the operation and maintenance of works and installations</p>	<p>1.1 specify what information and guidance will be needed by the people who will use the works and installations</p> <p>1.2 record the most recent information produced during design, construction and installation, which can be used for guidance about operation and maintenance</p> <p>1.3 produce guidance material on operation and maintenance which is logically structured, in a durable format and capable of interpretation by an informed lay user</p> <p>1.4 provide information in the guidance material which helps the client and users to identify limitations and to operate and maintain equipment, systems and services efficiently and without risk to health and safety</p> <p>1.5 explain information, demonstrate to and train clients and users to operate the installations efficiently and safely</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to provide information and guidance on the operation and maintenance of works and installations</p>	<p>2.1 evaluate how to specify what information and guidance will be needed by the people who will use the works and installations</p> <p>2.2 explain how to record the most recent information produced during design, construction and installation, which can be used for guidance about operation and maintenance</p> <p>2.3 explain how to produce guidance material on operation and maintenance which is logically structured, in a durable format and capable of interpretation by an informed lay user</p> <p>2.4 explain how to provide information in the guidance material which helps the client and users to identify limitations and to operate and maintain equipment, systems and services efficiently and without risk to health and safety</p> <p>2.5 explain information, demonstrate to and train clients and users to operate the installations efficiently and safely</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to manage project handover</p>	<p>3.1 confirm project requirements, consult with stakeholders and develop and agree a commissioning programme</p> <p>3.2 check that project requirements have been met and record outstanding work and defects</p> <p>3.3 carry out commissioning inspections and tests that require certification and ensure that they are witnessed by stakeholders as required</p> <p>3.4 identify and arrange for the satisfactory completion of any outstanding work</p> <p>3.5 arrange a handover inspection involving all relevant stakeholders, confirm their concerns that need to be addressed, and record and agree any required actions</p> <p>3.6 check that stakeholders respective responsibilities are adopted</p> <p>3.7 assemble and hand over works, installations and operational documentation in accordance with the contract</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to manage project handover</p>	<p>4.1 explain how to confirm project requirements, consult with stakeholders and develop and agree a commissioning programme</p> <p>4.2 explain how to check that project requirements have been met and record outstanding work and defects</p> <p>4.3 explain how to carry out commissioning inspections and tests that require certification and ensure that they are witnessed by stakeholders as required</p> <p>4.4 describe how to identify and arrange for the satisfactory completion of any outstanding work</p> <p>4.5 explain how to arrange a handover inspection involving all relevant stakeholders, confirm their concerns that need to be addressed, and record and agree any required actions</p> <p>4.6 explain how to check that stakeholders respective responsibilities are adopted</p> <p>4.7 explain how to assemble and hand over works, installations and operational documentation in accordance with the contract</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>5 Be able to obtain and evaluate project feedback information and make improvements</p>	<p>5.1 promote the value of making improvements from feedback and encourage all those involved in the project to cooperate and obtain feedback information</p> <p>5.2 identify and agree the areas to focus on for making improvements from feedback</p> <p>5.3 identify and agree valid and reliable methods and sources for obtaining feedback information on completed projects and for assessing and recommending improvements from feedback</p> <p>5.4 obtain, investigate and assess feedback information from all relevant methods and sources</p> <p>5.5 review the feedback information, match it against the original requirements and objectives and summarise both positive and negative factors</p> <p>5.6 recommend improvements from feedback received and justify the recommendations to decision makers</p> <p>5.7 classify improvements from feedback which have been agreed and incorporate the improvements accurately into updated procedures and databases</p> <p>5.8 summarise changes and improvements from feedback which have been agreed and promote them for adoption and use</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>6 Understand how to obtain and evaluate project feedback information and make improvements</p>	<p>6.1 propose how to promote the value of making improvements from feedback and encourage all those involved in the project to cooperate and obtain feedback information</p> <p>6.2 describe how to identify and agree the areas to focus on for making improvements from feedback</p> <p>6.3 describe how to identify and agree valid and reliable methods and sources for obtaining feedback information on completed projects and for assessing and recommending improvements from feedback</p> <p>6.4 explain how to obtain, investigate and assess feedback information from all relevant methods and sources</p> <p>6.5 examine how to review the feedback information, match it against the original requirements and objectives and summarise both positive and negative factors</p> <p>6.6 propose how to recommend improvements from feedback received and justify the recommendations to decision makers</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>6.7 explain how to classify improvements from feedback which have been agreed and incorporate the improvements accurately into updated procedures and databases</p> <p>6.8 explain how to summarise changes and improvements from feedback which have been agreed and promote them for adoption and use</p>			

Learner name: _____ Date: _____

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Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____
(if sampled)

Unit 21: Develop self and other people and contribute to improving design services in the built environment

Unit reference number: Y/600/7940

QCF level: 5

Credit value: 12

Guided learning hours: 20

Unit summary

This unit is about managing your own Continuing Professional Development; how you can help other people develop; and how you can contribute to the improvement of your business.

It is about reviewing your development needs, planning and deciding how to meet them, carrying out your plan and evaluating its success. This will lead on to an update of your needs review, and the process becomes ongoing. You must be able to produce and defend your CPD plans and records.

It is about helping other people to review their development needs; giving them information, advice and support about how they can meet them; and monitoring their progress.

It is about improving the design services of your business. You must understand what "business improvement" means; you must be able to engage your customers and your colleagues in your business in finding ways of continually providing better design services. It will link with many of the examples of current best business practice, eg IIP, ISO 9001, EFQM, Constructing Excellence, etc.

Assessment requirements/evidence requirements

Please note the information in the () round brackets relates to the Performance Criteria in the NOS and the information in the [] square brackets related to the Range Items in the NOS.

The following ranges apply to the assessment criteria given in this unit:

Learning outcomes 1 and 2:

1 Aims and objectives:

preparation for new jobs
intellectual challenge
need for updating
need to provide evidence of professional competence
compliance with employer and professional requirements
promotion or job change
awareness of shortcomings.

2 Personal development:

maintenance of existing competence
improvements to existing competence
development of new competence
commitment to professional excellence.

3 Sources of support and guidance:

national/industry bodies
Professional Institutions
education and training providers
in house.

4 Standards of competence:

client requirements
employer requirements
professional institution requirements
industry national occupational standards.

5 Development plan includes:

priorities
target dates
development activities.

6 Development activities:

formal courses
research
work experience
personal study.

Learning outcomes 3 and 4:

1 Opportunities:

paid time
personal time
office
project, group and mutual collaboration
on the job
off the job
professional activities.

2 People:

colleagues
junior colleagues
trainees entering the industry
potential entrants to the industry.

3 Form which is appropriate to their needs:

attending training and educational programmes
coaching
mentoring
instructing
agree work based learning opportunities.

Learning outcomes 5 and 6:

1 Strengths and weaknesses:

market share
scope of products and services
availability of resources
working practices
productivity
profitability and cost factors
corporate values
environmental impact
socio-econometric factors
ability to innovate
efficiency of systems (including Information Technology)
waste reduction

availability of skills
standardisation.

2 Design services:

design expertise and systems
advisory services
management services
control systems
information systems.

3 Analyse:

feasibility studies
Strengths, Weaknesses, Opportunities and Threats (SWOT) analyses
against industry performance benchmarks
reflection on professional practice.

4 Data and information - sources:

professional journals and publications
data from within the built environment
information from other industries
project feedback.

5 Measures:

adopting current best practice e.g IiP, ISO 9001, EFQM etc
new processes, methods and techniques
training.

Taken as a whole, the evidence must show that the learner consistently meets all the assessment criteria, across the ranges for the Element.

Performance evidence:

There must be workplace evidence against each assessment criteria. Where the workplace evidence does not cover a whole range, knowledge evidence must be provided to cover the remaining items of range for each relevant assessment criteria.

Learning outcome 1:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of personal development aims and objectives which include sources of support and guidance and selected standards of competence and reviews and updating (1.1, 1.2, 1.3, 1.8) [1.1, 1.2, 1.3, 1.4]
- 2 Profiles of present competence identified against standards of competence (1.4) [1.4]
- 3 Personal development plans which include identified development needs (1.5, 1.6) [1.2, 1.5]
- 4 Records of developed progress achievement and evidence of competence identified against standards of competence (1.6, 1.7) [1.4, 1.6]

Process Evidence: not applicable

Learning outcome 3:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 2 Records of personal development plans which include for identifying and providing learning opportunities, identification of current competence levels and learning needs and targets, preservations, feedback and encouragement (ALL) [ALL]

Simulations are not considered to be acceptable for producing evidence for this Element.

Process Evidence:

- 1 Presentations made (3.3, 3.5, 3.6) [3.2]

Learning outcome 5:

Product evidence:

The learner must produce documentary evidence from the workplace covering the following items that are considered to be common and key/critical to demonstrating competence.

- 1 Records of identified needs and requirements for operational change and development which includes identified measures, evaluated strengths and weaknesses of existing services, analysed data and information (5.1, 5.2, 5.3, 5.4) [ALL]
- 2 Records of measures, implemented and monitored, including the investigation of variances (5.5, 5.6) [5.5]
- 3 Checks and contributions to culture of continuous improvement (5.7, 5.8) [5.2, 5.5]

Process Evidence: not applicable

This unit must be assessed in a work environment and in accordance with the:

- additional requirements for qualifications using the title NVQs in QCF
- ConstructionSkills Consolidated Assessment Strategy for Construction and the Built Environment Craft, Supervisory, Technical, Managerial and Professional units and qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.

Assessment methodology

Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Be able to undertake personal development in your occupational practice area</p>	<p>1.1 identify your aims and objectives for undertaking personal development</p> <p>1.2 identify and contact sources of support and guidance for undertaking personal development</p> <p>1.3 identify and select relevant standards of competence against which personal development can be measured</p> <p>1.4 analyse the current personal level of performance against the identified standards of competence and record a profile of present competence and personal development needs</p> <p>1.5 prepare a development plan for achieving identified development needs</p> <p>1.6 undertake development activities aimed at achieving identified development needs, review and record progress and the effectiveness of the activities</p> <p>1.7 measure the achievement of identified development needs and record evidence of competence gained against the identified standards of competence</p> <p>1.8 review, revise and update aims and objectives to suit changing circumstances</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>2 Understand how to undertake personal development in your occupational practice area</p>	<p>2.1 describe how to identify your aims and objectives for undertaking personal development</p> <p>2.2 describe how to identify and contact sources of support and guidance for undertaking personal development</p> <p>2.3 describe how to identify and select relevant standards of competence against which personal development can be measured</p> <p>2.4 examine how to analyse the current personal level of performance against the identified standards of competence and record a profile of present competence and personal development needs</p> <p>2.5 explain how to prepare a development plan for achieving identified development needs</p> <p>2.6 evaluate how to undertake development activities aimed at achieving identified development needs, review and record progress and the effectiveness of the activities</p> <p>2.7 explain how to measure the achievement of identified development needs and record evidence of competence gained against the identified standards of competence</p> <p>2.8 examine how to review, revise and update aims and objectives to suit changing circumstances</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to help people to learn and benefit from your experience</p>	<p>3.1 identify appropriate opportunities for people to learn</p> <p>3.2 advise and mentor people so that they can identify their current level of competence, their learning needs and targets</p> <p>3.3 present information to other people using a pace, style and form which is appropriate to their needs</p> <p>3.4 encourage people to ask questions to seek clarification and advice when they need help and during learning activities</p> <p>3.5 review people's progress towards meeting agreed objectives and give realistic and positive feedback on achievements</p> <p>3.6 identify, through discussion with people, areas where they need help to achieve their agreed competence levels and use the information to produce an agreed personal development plan</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Understand how to help people to learn and benefit from your experience</p>	<p>4.1 describe how to identify appropriate opportunities for people to learn</p> <p>4.2 examine how advise and mentor people so that they can identify their current level of competence, their learning needs and targets</p> <p>4.3 explain how to present information to other people using a pace, style and form which is appropriate to their needs</p> <p>4.4 explain how to encourage people to ask questions to seek clarification and advice when they need help and during learning activities</p> <p>4.5 examine how to review people's progress towards meeting agreed objectives and give realistic and positive feedback on achievements</p> <p>4.6 describe how to identify, through discussion with people, areas where they need help to achieve their agreed competence levels and use the information to produce an agreed personal development plan</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>5 Be able to identify and implement improvements to design services</p>	<p>5.1 evaluate the strengths and weaknesses of existing design services and check whether they are suitable for achieving the required design service to clients and customers</p> <p>5.2 analyse available data and information and identify needs and requirements for operational change and development</p> <p>5.3 identify valid and realistic improvement measures which will maximise added value</p> <p>5.4 recommend the introduction of improvement measures into the organisation's operations and develop programmes for their implementation</p> <p>5.5 implement agreed improvement measures in design services and projects</p> <p>5.6 monitor the compliance of projects with the improvement objectives, investigate variances and restore compliance with the development plan</p> <p>5.7 check with clients and customers that the improvement measures have satisfied their needs</p> <p>5.8 contribute to a culture of continuous improvement to design services</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>6 Understand how to identify and implement improvements to design services</p>	<p>6.1 evaluate the strengths and weaknesses of existing design services and check whether they are suitable for achieving the required design service to clients and customers</p> <p>6.2 examine how to analyse available data and information and identify needs and requirements for operational change and development</p> <p>6.3 describe how to identify valid and realistic improvement measures which will maximise added value</p> <p>6.4 propose how to recommend the introduction of improvement measures into the organisation's operations and develop programmes for their implementation</p> <p>6.5 explain how to implement agreed improvement measures in design services and projects</p> <p>6.6 examine how to monitor the compliance of projects with the improvement objectives, investigate variances and restore compliance with the development plan</p> <p>6.7 explain how to check with clients and customers that the improvement measures have satisfied their needs</p> <p>6.8 explain how to contribute to a culture of continuous improvement to design services</p>			

Learner name: _____
Learner signature: _____
Assessor signature: _____
Internal verifier signature: _____
(if sampled)

Date: _____
Date: _____
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Date: _____

Further information

Our customer service numbers are:

BTEC and NVQ	0844 576 0026
GCSE	0844 576 0027
GCE	0844 576 0025
The Diploma	0844 576 0028
DiDA and other qualifications	0844 576 0031

Calls may be recorded for training purposes.

Useful publications

Related information and publications include:

- *Centre Handbook for Edexcel QCF NVQs and Competence-based Qualifications* published annually
- functional skills publications – specifications, tutor support materials and question papers
- *Regulatory Arrangements for the Qualification and Credit Framework* (published by Ofqual, August 2008)
- the current Edexcel publications catalogue and update catalogue.

Edexcel publications concerning the Quality Assurance System and the internal and standards verification of vocationally related programmes can be found on the Edexcel website.

NB: Some of our publications are priced. There is also a charge for postage and packing. Please check the cost when you order.

How to obtain National Occupational Standards

CITB-ConstructionSkills
Bircham Newton
King's Lynn
Norfolk PE31 6RH

Telephone: 01485 577577
Fax: 01485 577793
Email: call.centre@cskills.org

Professional development and training

Edexcel supports UK and international customers with training related to NVQ and BTEC qualifications. This support is available through a choice of training options offered in our published training directory or through customised training at your centre.

The support we offer focuses on a range of issues including:

- planning for the delivery of a new programme
- planning for assessment and grading
- developing effective assignments
- building your team and teamwork skills
- developing student-centred learning and teaching approaches
- building functional skills into your programme
- building effective and efficient quality assurance systems.

The national programme of training we offer can be viewed on our website (www.edexcel.com/training). You can request customised training through the website or by contacting one of our advisers in the Training from Edexcel team via Customer Services to discuss your training needs.

The training we provide:

- is active
- is designed to be supportive and thought provoking
- builds on best practice
- may be suitable for those seeking evidence for their continuing professional development.

Annexe A: Progression pathways

The Edexcel qualification framework for the Construction and the Built Environment sector

Level	General qualifications	Diplomas	BTEC vocationally-related qualifications	BTEC specialist qualification/professional	NVQ/competence
8					
7					
6					Please go to www.edexcel.com
5			Edexcel BTEC Level 5 HN Diploma in Construction		Please go to www.edexcel.com
4			Edexcel BTEC Level 4 HN Certificate in Construction		Please go to www.edexcel.com
3		Edexcel Level 3 Diploma in Construction and the Built Environment	Edexcel BTEC Level 3 Certificate, Subsidiary Diploma, Diploma and Extended Diploma in Construction and the Built Environment	Edexcel BTEC Level 3 Award, Extended Certificate and Diploma in Construction and the Built Environment	Please go to www.edexcel.com

Level	General qualifications	Diplomas	BTEC vocationally-related qualifications	BTEC specialist qualification / professional	NVQ/ competence
2		Edexcel Level 2 Diploma in Construction and the Built Environment	Edexcel BTEC Level 2 Certificate, Extended Certificate and Diploma in Construction	Edexcel BTEC Level 2 Award, Certificate and Extended Certificate in Construction and the Built Environment (Craft) and Construction and the Built Environment (Technician)	Please go to www.edexcel.com
1		Edexcel Level 1 Diploma in Construction and the Built Environment	Edexcel BTEC Level 1 Award, Certificate, Diploma in Construction (QCF)	Edexcel BTEC Level 1 Award, Certificate, Extended Certificate in Construction and the Built Environment	Please go to www.edexcel.com
Entry			Edexcel Entry Level BTEC Award in Construction (Entry 3) (QCF)		

Annexe B: Quality assurance

Key principles of quality assurance

- A centre delivering Edexcel qualifications must be an Edexcel recognised centre and must have approval for qualifications that it is offering.
- The centre agrees as part of gaining recognition to abide by specific terms and conditions around the effective delivery and quality assurance of assessment; the centre must abide by these conditions throughout the period of delivery.
- Edexcel makes available to approved centres a range of materials and opportunities to exemplify the processes required for effective assessment and provide examples of effective standards. Approved centres must use the guidance on assessment to ensure that staff who are delivering Edexcel qualifications are applying consistent standards.
- An approved centre must follow agreed protocols for: standardisation of assessors; planning, monitoring and recording of assessment processes; internal verification and recording of internal verification processes; and for dealing with special circumstances, appeals and malpractice.

Quality assurance processes

The approach to quality assured assessment is made through a partnership between a recognised centre and Edexcel. Edexcel is committed to ensuring that it follows best practice and employs appropriate technology to support quality assurance process where practicable. Therefore, the specific arrangements for working with centres will vary. Edexcel seeks to ensure that the quality assurance processes that it uses do not place undue bureaucratic processes on centres and works to support centres in providing robust quality assurance processes.

The Learning outcomes and assessment criteria in each unit within this specification set out the standard to be achieved by each learner in order to gain each qualification. Edexcel operates a quality assurance process, which is designed to ensure that these standards are maintained by all assessors and verifiers.

For the purposes of quality assurance all individual qualifications and units are considered as a whole. Centres offering these qualifications must be committed to ensuring the quality of the units and qualifications they offer, through effective standardisation of assessors and internal verification of assessor decisions. Centre quality assurance and assessment processes are monitored by Edexcel.

The Edexcel quality assurance processes will involve:

- gaining centre recognition and qualification approval if a centre is not currently approved to offer Edexcel qualifications
- annual visits to centres by Edexcel for quality review and development of overarching processes and quality standards. Quality review and development visits will be conducted by an Edexcel quality development reviewer
- annual visits by occupationally competent and qualified Edexcel Standards Verifiers for sampling of internal verification and assessor decisions for the occupational sector
- the provision of support, advice and guidance towards the achievement of National Occupational Standards.

Centres are required to declare their commitment to ensuring quality and appropriate opportunities for learners that lead to valid and accurate assessment outcomes. In addition, centres will commit to undertaking defined training and online standardisation activities.

Annexe C: Centre certification and registration

Edexcel Standards Verifiers will provide support, advice and guidance to centres to achieve Direct Claims Status (DCS). Edexcel will maintain the integrity of Edexcel QCF NVQs through ensuring that the awarding of this qualification is secure. Where there are quality issues identified in the delivery of programmes, Edexcel will exercise the right to:

- direct centres to take actions
- limit or suspend certification
- suspend registration.

The approach of Edexcel in such circumstances is to work with the centre to overcome the problems identified. If additional training is required, Edexcel will aim to secure the appropriate expertise to provide this.

What are the access arrangements and special considerations for the qualification in this specification?

Centres are required to recruit learners to Edexcel qualifications with integrity.

Appropriate steps should be taken to assess each applicant's potential and a professional judgement made about their ability to successfully complete the programme of study and achieve the qualification. This assessment will need to take account of the support available to the learner within the centre during their programme of study and any specific support that might be necessary to allow the learner to access the assessment for the qualification. Centres should consult Edexcel's policy on learners with particular requirements.

Edexcel's policy on access arrangements and special considerations for Edexcel qualifications aims to enhance access to the qualifications for learners with disabilities and other difficulties (as defined by the 1995 Disability Discrimination Act and the amendments to the Act) without compromising the assessment of skills, knowledge, understanding or competence. Please refer to *Access Arrangements and Special Considerations for BTEC and Edexcel NVQ Qualifications* for further details. www.edexcel.com.

Annexe D: Assessment requirements/strategy

The ConstructionSkills Assessment Strategy will be available on the Edexcel website, along side the full specification on the Construction NVQ/Competence page.

Annexe E: Additional requirements for qualifications that use the title NVQ within the QCF

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Purpose of document

- 1 The purpose of this document is to make clear what additional requirements are needed to assess and quality assure qualifications that use the title NVQ within the QCF.
- 2 When an SSC/SSB and awarding organisation wants to use the title NVQ in the naming of a qualification within the QCF, the awarding organisation is required to make sure this qualification is assessed and quality assured in accordance with these additional requirements and other requirements described in the SSC/SSB assessment strategy.
- 3 The aims of these additional requirements are to:
 - ensure that all competence based qualifications that use the title NVQ within the QCF are
 - assessed consistently
 - quality assured consistently
 - maintain the integrity of qualifications that use the title NVQ within the QCF
 - establish the NVQ brand within the QCF
 - keep bureaucracy associated with assessment and quality assurance of qualifications that use the title NVQ within the QCF to a minimum.

Background

- 4 ¹ “At the heart of an NVQ is the concept of occupational competence; the ability to perform to the standards required in employment across a range of circumstances and to meet changing demands. NVQs are first and foremost about what people can do. They go beyond technical skills to include planning, problem solving, dealing with unexpected occurrences, working with other people and applying the knowledge and understanding that underpins overall competence”.
- 5 NVQs are based entirely on National Occupational Standards (NOS) developed by an SSC/SSB, which describe the competence needed in an occupational role.
- 6 Qualifications that use the title NVQ within the QCF must comply with the rules of combination determined by the SSC/SSB. Awarding organisations are not allowed to develop another qualification that does not use the title NVQ within the QCF, if it uses the same rules of combination as a qualification that does use the title NVQ within the QCF.
- 7 The QCF offers increased flexibility in the way occupational competence can be assessed and demonstrated. Qualifications that use the title NVQ in the title within the QCF are just one way of assessing and demonstrating occupational competence. SSCs/SSBs are free to work with their awarding organisations to agree what qualifications will be used to assess occupational competence. Qualifications that use the title NVQ within the QCF, are not a preferred method for assessing occupational competence and all qualifications accredited through the QCF have equal status.
- 8 When developing a qualification for the QCF, including qualifications that use the title NVQ within the QCF, an awarding organisation must be a recognised awarding organisation and must meet the Qualification Requirements in the Regulatory Arrangements for the Qualifications and Credit Framework, published by The Office of the Qualifications and Examinations Regulator (Ofqual) in August 2008.
- 9 The qualification regulators confirmed that a group of SSCs and SSBs would be free to develop specific, additional requirements about the way in which qualifications that use the title NVQ within the QCF will be assessed and quality assured. For those recognised awarding organisations that want to assess occupational competence through the use of qualifications that use the title NVQ within the QCF, it has been agreed by SSCs and SSBs that the following additional requirements must be met.

¹ NCVQ's NVQ Criteria and Guidance 1995.

Additional requirements for qualifications that use the title NVQ within the QCF

Introduction

- 10 Qualifications that use the title NVQ within the QCF must be assessed and quality assured in accordance with the following additional requirements.

Assessment requirements

- 11 When a qualification uses the title NVQ within the QCF, awarding organisations are required to make sure their recognised assessment centres understand how learners are to be assessed.
- 12 Assessment methodologies must meet the assessment strategy developed in partnership between the relevant SSC or SSB and awarding organisations for the qualification. The assessment strategy must be published and made available separately and will include the requirements for assessment of qualifications that use the title NVQ within the QCF. The assessment criteria for each unit will be part of the units that make up the qualification.
- 13 Learners must complete real work activities in order to produce evidence to demonstrate they have met the NOS and are occupationally competent.
- 14 When a learner cannot complete a real work activity, simulation is allowed.
- 15 Simulation is allowed when:
 - a learner is required to complete a work activity that does not occur on a regular basis and therefore opportunities to complete a particular work activity do not easily arise
 - a learner is required to respond to a situation that rarely occurs, such as responding to an emergency situation
 - the safety of a learner, other individuals and/or resources will be put at risk.
- 16 When simulation is used, assessors must be confident that the simulation replicates the workplace to such an extent that learners will be able to fully transfer their occupational competence to the workplace and real situations.
- 17 Units that must not be assessed by simulation must be identified by the SSC/SSB in the assessment strategy for the qualification or family of qualifications.

- 18 Learners must be assessed by assessors:
- who are occupationally competent in the occupational areas they are assessing where they have sufficient and relevant technical/occupational competence in the unit, at or above the level of the unit being assessed and as defined by the assessment strategy for that qualification
 - ²who must hold or be working towards a suitable assessor qualification to confirm they understand assessment and how to assess learners
 - must be fully conversant with the unit(s) against which the assessments and verification are to be undertaken.
- 19 All assessors must carry out assessment to the standards specified in the A units.
- 20 All assessment decisions made by a trainee assessor must be checked by a qualified assessor or an assessor recognised by an awarding organisation.
- 21 Trainee assessors must have a plan, which is overseen by the recognised assessment centre, to achieve the relevant assessor qualification(s) within an agreed timescale.

² Currently an assessor could hold unit A1 and/or unit A2. Or from the past unit D32 and/or unit D33. SSCs also identify other suitable equivalent qualifications.

Quality assurance requirements

- 22 When a qualification uses the title NVQ within the QCF, awarding organisations are required to make sure their recognised assessment centres understand how the qualification will be quality assured.
- 23 Qualifications that use the title NVQ within the QCF, must be verified:
- internally by an internal verifier, who is accountable to the assessment centre
 - externally by an external verifier, who is accountable to the awarding organisation or an agent of the awarding organisation.
- 24 With reference to internal verification, internal verifiers must:
- ³hold or be working towards a suitable internal verifier qualification to confirm they understand how to internally verify assessments
 - have sufficient and relevant technical/occupational familiarity in the unit(s) being verified
 - be fully conversant with the standards and assessment criteria in the units to be assessed
 - understand the awarding organisation's quality assurance systems and requirements for this qualification.
- 25 Trainee internal verifiers must have a plan, which is overseen by the recognised assessment centre, to achieve the internal verifier qualification within an agreed timescale.
- 26 With reference to external verification, external verifiers must:
- ⁴hold or be working towards a suitable external verification qualification to confirm they understand and are able to carry out external verification
 - have no connections with the assessment centre, in order to maintain objectivity
 - have sufficient and relevant technical/occupational understanding in the unit(s) being verified
 - be fully conversant with the standards and performance criteria in the units to be assessed
 - understand the awarding organisation's quality assurance systems for this qualification.
- 27 Trainee external verifiers must have a plan, which is overseen by the awarding organisation, to achieve the external verifier qualification within an agreed timescale.

³ Currently an internal verifier needs to hold unit V1. Or from the past unit D34. SSCs also identify other suitable equivalent qualifications.

⁴ Currently an external verifier needs to hold unit V2. Or from the past unit D35.

- 28 Awarding organisations must decide the frequency of external monitoring activities. Any decision must be based on:
- the risks associated with a qualification that is designed to help a learner demonstrate occupational competence
 - an evaluation of the centre's performance and past record.
- 29 Awarding organisations will have in place suitably constituted audit processes, which are supported by naturally occurring quality assurance and monitoring systems that already exist in workplace assessment environments.

Ofqual
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Llywodraeth Cynulliad Cymru
Welsh Assembly Government

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For more information on Edexcel and BTEC qualifications please
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