

Higher National Unit Specification

General information for centres

Unit title: Economics and the Built Environment

Unit code: DW3G 35

Unit purpose: This Unit seeks to provide the candidate with the ability to apply basic micro and macro economic concepts to the built environment. The Unit has been devised to enable candidates studying Quantity Surveying, Construction Management and Facilities Management programmes to demonstrate both knowledge and understanding of economics within the construction industry. It is intended that this Unit will help candidates develop the ability to apply, analyse and evaluate the effects of economic issues upon the operations of the construction industry.

On completion of the Unit the candidate should be able to:

- 1 Explain basic economic concepts and systems.
- 2 Describe and explain the market mechanism.
- 3 Examine the elements of, and influences on business costs.
- 4 Describe the different types of business organisations found in the construction industry and their sources of finance.
- 5 Explain the use of cost benefit analysis.

Credit points and level: 1 HN Credit at SCQF level 8: (8 SCQF credit points at SCQF level 8*).

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Recommended prior knowledge and skills: It would be of advantage if a candidate has a basic knowledge and understanding of the structure and workings construction industry. Possession of basic knowledge and understanding may be evidenced by possession of an appropriate SQA Higher National Unit. In addition, it would also be of advantage if candidates had a basic knowledge and understanding of the subject of economics.

Core Skills: There are opportunities to develop the Core Skill(s) of Communication, Numeracy, Problem Solving, in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

General information for centres (cont)

Assessment: It is possible to assess candidates either on an individual Outcome basis, combinations of Outcomes or by a single holistic assessment combining all Outcomes. The assessment paper/s should be composed of an appropriate balance of short answer, restricted response and structured questions. Assessment should be conducted under supervised, controlled conditions. A single assessment covering all outcomes should not exceed two hours in duration. It should be noted that candidates must achieve all the minimum evidence specified for each Outcome in order to pass this Unit.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

An exemplar instrument of assessment and marking guidelines has been produced to provide examples of the type of evidence required to demonstrate achievement of the aims of this Unit and to indicate the national standard of achievement at SCQF level 8.

Higher National Unit specification: statement of standards

Unit title: Economics and the Built Environment

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The sections of the Unit stating the Outcomes, knowledge and/or skills, and evidence requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Throughout the unit emphasis will be placed where appropriate on the application of Health & Safety and Sustainability. Safe working practises should be looked at in accordance with current safety codes of practise and regulations. Sustainability should include reference to criteria affecting sustainability, impact of not implementing sustainability on the environment and the legislation promoting sustainability.

Outcome 1

Explain basic economic concepts and systems.

Knowledge and/or skills

- ◆ The scope of economics and essential terminology
- ◆ Economic systems for resource allocation
- ◆ The contribution of the construction industry towards the national economy

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ describe economic concepts and relationships

Evidence for the knowledge and /or skills for this Outcome will be provided on a sample basis. In any assessment of this Outcome a minimum of **two out of three** knowledge and/or skills items should be sampled. In order to ensure that candidates will not be able to foresee what items they will be questioned on, a different sample of knowledge/skill items is required each time the Outcome is assessed. Candidates must provide a satisfactory response to both items.

Evidence should be generated through assessment undertaken in controlled, supervised conditions. Assessment should be conducted under closed book conditions and as such candidates should not be allowed to bring textbooks, handouts or notes to the assessment.

Assessment guidelines

Questions used to elicit candidate evidence should take the form of an appropriate balance of short answer, restricted response and structured questions.

Higher National Unit specification: statement of standards (cont)

Unit title: Economics and the Built Environment

The assessment for this outcome might be combined with that for Outcomes 2, 3 and 4 to form a single assessment paper.

Outcome 2

Describe and explain the market mechanism.

Knowledge and/or skills

- ◆ The laws of supply and demand
- ◆ Price elasticity of demand
- ◆ Price elasticity of supply

Evidence Requirements

Candidates will need evidence to demonstrate their skills and/or knowledge by showing that they can:

- ◆ describe characteristics of the market correctly
- ◆ explain accurately the market mechanisms by which prices are attained, correctly illustrated by the use of appropriate diagrams
- ◆ explain changes in market situations correctly with the aid of appropriate diagrams

Evidence for the knowledge and /or skills for this Outcome will be provided on a sample basis. In any assessment of this Outcome a minimum of **two out of three** knowledge and/or skills items should be sampled. In order to ensure that candidates will not be able to foresee what items they will be questioned on, a different sample of knowledge/skill items is required each time the Outcome is assessed. Candidates must provide a satisfactory response to both items.

Evidence should be generated through assessment undertaken in controlled, supervised conditions. Assessment should be conducted under closed book conditions and as such candidates should not be allowed to bring textbooks, handouts or notes to the assessment.

Assessment guidelines

Questions used to elicit candidate evidence should take the form of an appropriate balance of short answer, restricted response and structured questions.

The assessment for this Outcome might be combined with that for Outcomes 1, 3 and 4 to form a single assessment paper.

Outcome 3

Examine the elements of, and influences on, business costs

Higher National Unit specification: statement of standards (cont)

Unit title: Economics and the Built Environment

Knowledge and/or skills

- ◆ Costs facing the firm
- ◆ Short and long term influences with reference to the firm's ability to vary factors of production
- ◆ Law of Diminishing Marginal Product
- ◆ Economies and diseconomies of scale

Evidence Requirements

Candidates will need evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ identify elements of and influences on business costs

Evidence for the knowledge and /or skills for this Outcome will be provided on a sample basis. In any assessment of this Outcome a minimum of **three out of four** knowledge and/or skills items should be sampled. In order to ensure that candidates will not be able to foresee what items they will be questioned on, a different sample of knowledge/skill items is required each time the Outcome is assessed. Candidates must provide a satisfactory response to all three items.

Evidence should be generated through assessment undertaken in controlled, supervised conditions. Assessment should be conducted under closed book conditions and as such candidates should not be allowed to bring textbooks, handouts or notes to the assessment.

Assessment guidelines

Questions used to elicit candidate evidence should take the form of an appropriate balance of short answer, restricted response and structured questions.

The assessment for this Outcome might be combined with that for Outcomes 1, 2 and 4 to form a single assessment paper.

Outcome 4

Describe the different types of business organisations found in the construction and their sources of finance

Knowledge and/or skills

- ◆ The types of construction business organisation
- ◆ The types and sources of finance for the construction firm

Evidence Requirements

Candidates will need evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ define correctly at least two types of construction business organisation
- ◆ explain fully at least two types and sources of finance for a construction business

Higher National Unit specification: statement of standards (cont)

Unit title: Economics and the Built Environment

In any assessment of this Outcome **all** knowledge and/or skills items should be included. Candidates must provide a satisfactory response to both items.

Evidence should be generated through assessment undertaken in controlled, supervised conditions. Assessment should be conducted under closed book conditions and as such candidates should not be allowed to bring textbooks, handouts or notes to the assessment.

Assessment guidelines

Questions used to elicit candidate evidence should take the form of an appropriate balance of short answer, restricted response and structured questions.

The assessment for this Outcome might be combined with that for Outcomes 1, 2 and 3 to form a single assessment paper.

Outcome 5

Explain the use of cost benefit analysis within the construction industry context

Knowledge and/or skills

- ◆ Problems of social choice related to major construction projects affecting society and the environment

Evidence Requirements

Candidates will need evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ provide a comprehensive explanation for using cost benefit analysis, and detailed examination of problems using cost benefit analysis, to assist in making decisions for major construction projects

In any assessment of this Outcome **all** knowledge and/or skills items should be included. Candidates must provide a satisfactory response to this item.

Evidence should be generated through assessment undertaken in controlled, supervised conditions. Assessment should be conducted under open book conditions and as such candidates should be allowed to bring textbooks, handouts or notes to the assessment.

Assessment guidelines

Questions used to elicit candidate evidence should take the form of a single structured question.

The assessment for this outcome might be a single assessment paper which might beneficially be based on an appropriate case study

Administrative Information

Unit code:	DW3G 35
Unit title:	Economics and the Built Environment
Superclass category:	TC
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Higher National Unit specification: support notes

Unit title: Economics and the Built Environment

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

This Unit provides the candidate with the knowledge and understanding of the relationship between economic concepts and theories and the construction industry context. Attention should be paid in the delivery of this unit to the syllabus content of the other units in the programme, particularly the introduction to the industry.

Recommended time allocations to each outcome are given as guidance towards the depth of treatment which might be applied to each topic. This guidance has been used in the design of the assessment exemplar material provided with the Unit.

1 Basic economic concepts and systems (7 hours)

The scope of economics and essential terms:

- ◆ economics as a social science
- ◆ essential terms: scarcity, opportunity cost and resources

Economic systems for resource allocation:

- ◆ free market model
- ◆ the mixed economy

The contribution of the construction industry towards the national economy:

- ◆ the construction industry's share of total employment, output and income in the UK economy
- ◆ the changing contribution of the construction industry to national income and employment
- ◆ the explicit and implicit contribution of the construction industry to foreign trade

2 The market mechanism (9 hours)

The laws of supply and demand:

- ◆ The demand schedule and demand curve
- ◆ The supply schedule and the supply curve
- ◆ Application of demand curve and supply curve to show a shortage, a surplus and the equilibrium price

Elasticities of supply and demand:

- ◆ the concept of elasticity
- ◆ price elasticity of demand and price elasticity of supply

Higher National Unit specification: support notes (cont)

Unit title: Economics and the Built Environment

3 The elements of, and influences on business costs (7 hours)

Costs

- ♦ fixed, variable, average, total, marginal, social

Influences

- ♦ short and long term, factor mix, marginal productivity, economies and diseconomies of scale

4 The different types of business organisations found in the construction industry and their sources of finance (6 hours)

Business organisations and sources of finance:

Organisations

- ♦ sole proprietor; partnership, private limited company, public limited company

Finance

- ♦ short, long and medium term, internal/external shares, bonds, reinvestment of profits, gearing ratio

5 The use of cost benefit analysis (11 hours)

Problems of social choice:

- ♦ public sector investment appraisal (Cost Benefit Analysis)
- ♦ externalities
- ♦ the limitations of cost benefit analysis as a decision tool:
 - choosing which costs and benefits to include
 - methods of evaluating selected costs and benefits and the difficulty of attributing values to them (items with market prices; items with no market price — shadow pricing)
 - the political, budgetary and legal constraints that may affect a project

Guidance on the delivery and assessment of this Unit

This Unit requires a fundamental understanding of the construction industry and economic principles. It is recommended that this Unit is delivered in the second year of HND Built Environment awards where appropriate.

Where this Unit is incorporated into other group awards it is recommended that it be delivered in the context of the specific occupational area(s) that the award is designed to cover.

Details on approaches to assessment are given under Evidence Requirements and Assessment Guidelines under each Outcome in the Higher National Unit specification: statement of standards section. It is recommended that these sections be read carefully before proceeding with assessment of candidates.

Higher National Unit specification: support notes (cont)

Unit title: Economics and the Built Environment

The volume of evidence required for each assessment should take into account the overall number of assessments being contemplated within this unit and the design of the overall teaching programme. In designing the assessment instrument/s, opportunities should be taken to generate appropriate evidence to contribute to the assessment of Core Skills units.

Opportunities for developing Core Skills

The following grid provides a general guide to opportunities for the development of Core Skills in this Unit. Opportunities for the development of Core Skills at the output level are more fully identified in the Core Skills Signposting Guide.

Core Skill	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5
1 Communication					
Reading	✓	✓	✓	✓	✓
Writing	✓	✓	✓	✓	✓
Oral					
2 Numeracy					
Using Number		✓	✓	✓	
Using Graphical Information		✓	✓	✓	
3 IT					
Using Information Technology					
4 Problem Solving					
Critical Thinking					✓
Planning and Organising					
Reviewing and Evaluating					
5 Working with Others					

Higher National Unit specification: support notes (cont)

Unit title: Economics and the Built Environment

Open learning

Given that appropriate materials exist this Unit could be delivered by distance learning, which may incorporate some degree of on-line support. However, with regard to assessment, planning would be required by the centre concerned to ensure the sufficiency and authenticity of candidate evidence. Arrangements would be required to be put in place to ensure that assessment/s were conducted under controlled, supervised conditions.

Candidates with additional support needs

This Unit specification is intended to ensure that there are no artificial barriers to learning or assessment. The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance on Alternative Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs*, which is available on the SQA website **www.sqa.org.uk**.

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Evidence that you can satisfy the knowledge and skill elements of this Unit will be obtained by assessment in controlled, supervised conditions to which you will not be allowed to bring textbooks, handouts or notes to some of the assessments.