

SQA Advanced Unit Specification

General information for centres

Unit title: Facilities Management: Operational and Support Services

Unit code: HV89 48

Unit purpose: This Unit seeks to provide the candidate with knowledge and understanding of space planning, building maintenance, energy and waste management of buildings in use.

On completion of the Unit candidates should be able to:

- 1 Understand constraints of building design on space planning.
- 2 Identify the benefits of life cycle costing, building management systems and alternative maintenance strategies.
- 3 Explain the benefits of building energy management systems.
- 4 Describe the key elements of a waste management strategy.

Credit points and level: 1 SQA 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 National 1 to Doctorates.*

Recommended prior knowledge and skills: It would be an advantage for candidates to have a basic knowledge and understanding of construction technology: superstructure, building materials performance and drawing.

Core Skills: There are opportunities to develop the Core Skill of 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.

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 single holistic assessment event should not exceed two hours. The assessment paper/s should comprise an appropriate balance of short answer, restricted response and structured questions. It should be noted that candidates must achieve all the minimum evidence specified for each outcome in order to pass this Unit.

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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.

Candidates should be expected to make their own assumptions in support of their responses to these Outcomes.

An exemplar instrument of assessment and marking guidelines have been produced to provide an example 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.

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Unit specification: statement of standards

Unit title: Facilities Management: Operational and Support Services

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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 and Safety and Sustainability. Safe working practices should be looked at in accordance with current safety codes of practice 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

Understand constraints of building design on space planning.

Knowledge and/or skills

- ◆ Constraints of building design on space planning
- ◆ Space measures and planning process
- ◆ Space types and alternative working environments
- ◆ Space allocation, utilisation and budgeting

Evidence Requirements

Evidence for the knowledge and/or skills in this Outcome will be provided on a sample basis. In any assessment of this Outcome **two out of four** knowledge and/or skills items is required each time the Outcome is assessed. Candidates must provide a satisfactory response to both items.

In order to ensure the candidate will not be able to foresee what items they will be questioned on, a different sample of **two out of four** knowledge and/or skills items is required each time the Outcome is assessed.

Where sampling takes place, a candidate's response can be judged to be satisfactory where evidence provided is sufficient to meet the requirements for the items sampled by showing that the candidate is able to:

- ◆ identify and evaluate constraints of building design on space planning

Assessment guidelines

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

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The assessment for this Outcome might be combined with one or more of the other outcomes to form one or more assessment papers. The assessment event should be carried out under closed book, supervised and controlled conditions.

Outcome 2

Identify the benefits of life cycle costing, building management systems and alternative maintenance strategies.

Knowledge and/or skills

- ◆ Life cycle costing in regard to whole life performance
- ◆ Building management systems
- ◆ Computer aided facilities management software
- ◆ Alternative building maintenance strategies

Evidence Requirements

Evidence for the knowledge and/or skills in this Outcome will be provided on a sample basis. In any assessment of this Outcome **two out of four** knowledge and/or skills items is required each time the Outcome is assessed. Candidates must provide a satisfactory response to both items.

In order to ensure the candidate will not be able to foresee what items they will be questioned on, a different sample of **two out of four** knowledge and/or skills items is required each time the Outcome is assessed.

Where sampling takes place, a candidate's response can be judged to be satisfactory where evidence provided is sufficient to meet the requirements for the items sampled by showing that the candidate is able to:

- ◆ identify, explain and evaluate the benefits of alternative facilities management

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 one or more of the other outcomes to form one or more assessment papers. The assessment event should be carried out under closed book, supervised and controlled conditions.

Outcome 3

Explain the benefits of building energy management systems.

Knowledge and/or skills

- ◆ The “energy primer” and eight practical steps for gaining control
- ◆ Financial and environmental benefits of a building energy management system

- ◆ Main parts of a building energy management system
- ◆ Relationship of building design and services and energy efficiency

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Evidence Requirements

Evidence for the knowledge and/or skills in this Outcome will be provided on a sample basis. In any assessment of this Outcome **two out of four** knowledge and/or skills items is required each time the Outcome is assessed. Candidates must provide a satisfactory response to both items.

In order to ensure the candidate will not be able to foresee what items they will be questioned on, a different sample of **two out of four** knowledge and/or skills items is required each time the Outcome is assessed.

Where sampling takes place, a candidate's response can be judged to be satisfactory where evidence provided is sufficient to meet the requirements for the items sampled by showing that the candidate is able to:

- ◆ explain and evaluate the benefits of using a building energy management system

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 one or more of the other outcomes to form one or more assessment papers. The assessment event should be carried out under closed book, supervised and controlled conditions.

Outcome 4

Describe the key elements of a waste management strategy.

Knowledge and/or skills

- ◆ Different types of building and occupant waste and methods of disposal
- ◆ Different types of water waste and methods of disposal
- ◆ Current legislation in terms of environmental protection and control of pollution
- ◆ Typical components of an effective environmental waste management strategy

Evidence Requirements

Evidence for the knowledge and/or skills in this Outcome will be provided on a sample basis. In any assessment of this Outcome **two out of four** knowledge and/or skills items is required each time the Outcome is assessed. Candidates must provide a satisfactory response to both items.

In order to ensure the candidate will not be able to foresee what items they will be questioned on, a different sample of **two out of four** knowledge and/or skills items is required each time the Outcome is assessed.

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Where sampling takes place, a candidate's response can be judged to be satisfactory where evidence provided is sufficient to meet the requirements for the items sampled by showing that the candidate is able to:

- ◆ describe and explain the key elements of a waste management strategy

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 one or more of the other outcomes to form one or more assessment papers. The assessment event should be carried out under closed book, supervised and controlled conditions.

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Administrative Information

Unit code:	HV89 48
Unit title:	Facilities Management: Operational and Support Services
Superclass category:	TH
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Unit specification: support notes

Unit title: Facilities Management: Operational and Support Services

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 has been written in order to allow candidates to develop knowledge, understanding and skills in the following areas:

- 1 Understand constraints of building design on space planning.
- 2 Identify the benefits of life cycle costing, building management systems and alternative maintenance strategies.
- 3 Explain the benefits of building energy management systems.
- 4 Describe the key elements of a waste management strategy.

The context of knowledge delivered in this Unit will focus on “buildings in use” therefore developing on prior knowledge, providing new knowledge and forming links with subject areas in SQA Advanced Diploma in Facilities Management.

The context of delivery will therefore encourage candidates to adopt a holistic approach in connecting existing and new knowledge across the relevant subject areas within the Group Award.

The context of delivery will also present knowledge in the form of mini-case studies which will encourage candidates in their application of concepts and analysis in problem solving.

This Unit has been developed as part of a group of facilities management units. There are three other units in the group entitled Facilities Management: Property Services, Data and Telecommunications Infrastructure and Facilities Resource Planning and Contract Management. This Unit at SCQF level 8 is contained within the SQA Advanced Diploma in Facilities Management and SQA Advanced Certificate/Diploma in Building Surveying awards.

The three Units mentioned in the previous paragraph have been developed as an integrated suite of units to meet all the facilities management requirements of the SQA Advanced Certificate and SQA Advanced Diploma in Built Environment awards. However this does not preclude the use of one or more of these units in other awards where award designers consider this to be appropriate. As well as providing a substantial course in facilities management principles these units also provide important underpinning knowledge, understanding and skills for other parts of the SQA Advanced Certificate and SQA Advanced Diploma in Built Environment awards.

In designing this unit the unit writers have identified the range of topics they would expect to be covered by lecturers. The writers have also given recommendations as to how much time should be spent on each outcome. This has been done to help lecturers to decide what depth of treatment should be given to the topics attached to each of the outcomes. Whilst it is not mandatory for the centre to use the list of topics it is strongly recommended that it does so. This is to ensure continuity of teaching and learning across the Facilities Management units and because the assessment exemplar pack for this unit is based on the knowledge and/or skills and list topics in each of the outcomes.

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This Unit is core to the delivery of this Group Award.

The list of topics is given below. Lecturers are advised to study this list of topics in conjunction with the assessment exemplar pack so that they can get a clear indication of the standard of achievement expected of candidates in this Unit.

1 Understand constraints of building design on space planning. (10 hours)

- ◆ Different measurements of space will be explained including gross external, gross internal, net internal and net usable areas. Cellular and open plan working environments will be explained, emphasizing the importance of space as the primary premises cost driver.

2 Identify life cycle costing, building management systems and alternative maintenance strategies (10 hours)

- ◆ Maintenance classifications will be explained with particular emphasis on statutory compliance. Life cycle costing will be explained within the context of maintenance budgeting. The benefits of building management systems will be explained as will proactive and reactive maintenance strategies.

3 Explain the benefits of building energy management systems (10 hours)

- ◆ Managing energy efficiently will be explained within the context of sustainability. Environmental and financial impact in energy usage will be explained as will the role and benefits of building energy management systems. The component parts of alternative energy management strategies will be explained.

4 Describe the key elements of a waste management strategy (8 hours)

- ◆ Different types of building and occupant waste and the risks attached to its disposal will be explained within the context of current legislation. The role and benefits of environmental management systems in developing energy management strategies will be explained.

The content of this Unit will include provision and application of knowledge across a typical range of operational and support services, with particular focus on space planning, maintenance strategies, energy, waste and environmental and health and safety management.

Guidance on the delivery and assessment of this Unit

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. It is recommended that these sections be read carefully before proceeding with assessment of candidates.

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The format of delivery of this unit may include:

- ◆ a series of lectures based on written handouts providing information in the form of first principles and processes including examples case studies and best practice
- ◆ open and networking sessions encouraging interactive discussion
- ◆ computing sessions encouraging searching given websites for information
- ◆ summary and feedback session

Lectures will be designed to encourage two-way discussion relevant to the given subject areas.

Open and networking sessions will encourage candidates to share knowledge and experiences within given subject areas.

Computing sessions will encourage candidates to use information technology to source knowledge relevant to given subject areas.

Summary and feedback will highlight areas of strength and weakness in both knowledge and skills relative to the subject areas within this Unit.

The main aims of this format of delivery of the unit should ensure:

- ◆ clarity of purpose
- ◆ opportunity to share knowledge and skills
- ◆ opportunity of developing existing and new skills in Oral and Written Communication, Numeracy, Information Technology, Problem Solving and Working with Others

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.

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

Open learning

Given the availability of suitable learning material 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. Arrangement would be required to be put in place to ensure that the assessment, which is required to be at a single event, was conducted under controlled, supervised conditions.

For information on normal open learning arrangements, please refer to the SQA guide *Assessment and Quality Assurance of Open and Distance Learning* (SQA 2000).

Equality and inclusion

This unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

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General information for candidates

Unit title: Facilities Management: Operational and Support Services

This Unit has been designed to allow you to develop knowledge, understanding and skills in a range of building services provided in domestic buildings. It will enable you to interpret the requirements and propose practical schemes for facilities management services in commercial buildings. The content of the unit is intended to provide sufficient depth of knowledge and understanding of facilities management for those following courses in the Built Environment programme.

You will be given an introduction to the unit including a list of recommended reading texts and journals some of which would be available in the college library.

You will be encouraged to form links with other subject areas within the unit and with other units within the group.

During formative sessions you should be able to demonstrate ability in synthesizing knowledge across other subject areas within this, and other units relevant to the group award.

Operational and Support Services amongst others may include:

Operational Services

- ◆ Building Fabric Maintenance
- ◆ Building Services Maintenance
- ◆ Fire Safety Systems
- ◆ Utilities — electricity, gas and water
- ◆ Waste Disposal
- ◆ Cleaning and Hygiene

Support Services

- ◆ Security
- ◆ Mail
- ◆ Stationery, printing and Reprographics
- ◆ Relocation
- ◆ Catering and Vending
- ◆ Health and Safety

Whilst the above services will be discussed within the context of facilities management there will be natural links with knowledge gained in other units within the Group Award.

The central theme of the Unit will be facilities management practice within the context of “buildings in use” connections will be made to core business, thus demonstrating the contribution of facilities to overall business performance.

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On completion of the Unit you should be able to:

- 1 Identify and evaluate space measures, types and typical constraints of building design on space planning.
- 2 Identify, explain and evaluate the benefits of life cycle costing, building management and software systems and alternative maintenance strategies.
- 3 Explain the energy primer and identify the parts and financial and environmental benefits of building energy management systems.
- 4 Describe and explain different types of building and occupant waste and the key elements of a waste management strategy.