

# Unit 21: Sustainable Facilities Management

<b>Unit code:</b>	<b>T/602/5992</b>
<b>QCF Level 3:</b>	<b>BTEC National</b>
<b>Credit value:</b>	<b>10</b>
<b>Guided learning hours:</b>	<b>60</b>

## ● Aim and purpose

This unit gives learners an understanding of the main principles involved in sustainable facilities management, the environmental and economic challenges, and ways of embedding sustainability to meet the needs of both business and the wider community. Learners will also gain an understanding of the benefits of improved facilities management and will have the opportunity to explore how they might effect change through pursuing career opportunities in sustainable facilities management.

## ● Unit introduction

Understanding facilities management as both a fundamental function in the process of running a business and its positive and negative impacts on business, the wider community and the environment has become increasingly important. Sustainable facilities management has an essential part to play in reducing carbon emissions, costs and environmental impacts.

It could be argued that it is not an area that has been given adequate importance or attention, but through job roles becoming available focusing on corporate, social and environmental responsibilities, the changes in business practice and opportunities are now being highlighted.

Business managers and workers need to raise their awareness and understanding of the responsibilities facing the companies in which they work and the impact of both good and bad practices and effective management on the economic, social and environmental factors that surround them.

Facilities managers in particular are well placed to make positive changes to practices that will benefit all parties and achieve a more sustainable business. Some companies and individuals are knowledgeable and well ahead in reducing their carbon footprint/carbon emissions and making these positive sustainability changes, but this awareness is not adequately widespread.

With effective sustainable facilities management the success of a company can grow, with higher economic turnover, lower overheads, motivated staff and a good public image. There is now plenty of advice and help to improve sustainable facilities management from charities and bodies such as the Carbon Trust, Energy Saving Trust and the Environment Agency, as well as some local authorities. Learners will take a close look at current changes in business practice as well as developments in the job market.

Through this unit learners will explore the issues faced by businesses, facilities managers and the wider community in developing and implementing sustainable facilities management. It will equip learners with knowledge, skills and understanding to improve their practice for progression in industry. Learners will also examine the role of facilities management and its impact on the environment, developing an approach that will allow them to better understand the sustainability issues faced.

## ● Learning outcomes

### On completion of this unit a learner should:

- 1 Understand the principles of sustainable facilities management
- 2 Understand factors contributing to sustainable facilities management
- 3 Understand the benefits of improved facilities management
- 4 Know the opportunities for sustainable facilities management roles across businesses.

# Unit content

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## 1 Understand the principles of sustainable facilities management

*Facilities management:* buildings; services eg hard services, soft services; relationship management eg consultation, suppliers, customers, partners; audit

*Economic:* cost reduction; auditing; trends; procurement; tender; profit

*Methods and systems:* audit management systems eg corporate ethos and vision statements, supply chain, procurement, negotiation, plant, property, key performance indicators, service level agreements; project management; diagnostics; data collection; carbon reduction; legal compliance; trend analysis; forecasting; strategic

*Roles and responsibilities:* statutory; corporate social; risk management; environmental; community; carbon reduction; recycling; customer eg awareness, trust, satisfaction, leadership, partnership

## 2 Understand factors contributing to sustainable facilities management

*Resources:* audited; finite; adequacy; maintenance; recycling; supply chain; staff eg management, interim management, adequacy, education and training, involvement, commitment, time

*Economic:* reductions eg costs, carbon emissions, energy consumption, night sky pollution, maintenance required, workplace absenteeism, improved public relations image, green marketing

*Workforce:* interim management; absenteeism; motivation; working environments; staff development eg job descriptions, coaching and mentoring, customised training, involvement, personal interest

*Services:* suppliers; support services; compliance; assessments; procedures

## 3 Understand the benefits of improved facilities management

*Improvements:* function; economic; air quality eg pollution levels, indoor environments; water quality; employee motivation; modernisation; efficiency (energy saving, reduced carbon footprint)

*Innovations:* design eg energy source, materials, pollution; improvements eg implications, outsourcing, modernisation, human and ecosystem health, ecological economics; integrated design disciplines and sciences

*Workforce:* morale; turnover; knowledge; ownership; ideas generation; problem solving; awareness; motivation

*Environmental:* carbon emissions; waste reduction; community intelligence; policies; integrity and coherence

*Issues:* cost implications eg budget allocated; educational requirements eg recent knowledge, qualifications, industry guidance; size of organisation; quantifying benefits; justification for activity; resistance; government legislation; global picture

## 4 Know the opportunities for sustainable facilities management roles across businesses

*Sustainable facilities management roles:* researching the job market eg local and national government, local newspapers, internet search, environmental agencies, interviews

*Analysis:* identifying impacts; group discussion; skills set; skills gap; progression opportunities; identification of staff development, training

*Application:* appropriate choices; suitability; integrity; empowerment

*Opportunities for change:* scoping; 'blue-sky' thinking; range; identifying roles eg future progression

*Implications:* change; impact; awareness raising; group consciousness; corporate responsibility; raising profiles

## Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
<b>P1</b> explain, using relevant terminology, the economic principles of sustainable facilities management [IE1]	<b>M1</b> explain methods and systems used in sustainable facilities management	<b>D1</b> compare and contrast methods and systems used in sustainable facilities management
<b>P2</b> discuss the main roles and responsibilities of sustainable facilities management [RL1]		
<b>P3</b> explain, using appropriate terminology, the main factors which contribute to sustainable facilities management [RL2]		
<b>P4</b> analyse relevant factors facing sustainable facilities managers in a selected organisation [IE2; EP1]	<b>M2</b> discuss the responsibilities involved in sustainable facilities management for a selected organisation	
<b>P5</b> explain the benefits of improved sustainable facilities management, for a selected organisation [EP2]	<b>M3</b> compare and contrast the benefits of improved sustainable facilities management for a selected organisation	<b>D2</b> analyse how issues might undermine sustainable improvements in facilities management for a selected organisation
<b>P6</b> identify appropriate sustainable facilities management jobs currently available. [IE3]	<b>M4</b> explain the opportunities for positive change through developing these roles.	<b>D3</b> evaluate the implications of poor development of sustainable facilities management roles in business.

**PLTS:** This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

# Essential guidance for tutors

## Delivery

Tutors delivering this unit could use a wide range of techniques, including lectures, discussions, seminar presentations, workplace investigations, questionnaires, case studies, visiting speakers, site visits, internet and/or library-based research and personal and/or industrial experience. Delivery should engage, stimulate, motivate, educate and enthuse learners.

Learners will need to get involved in the workings of either a business, charity or community activity to understand how they operate, what resources they require to function and how much they cost. This allows learners to recommend changes in support of improved sustainability of the facilities management function.

This unit will be all the more effective if learners become involved in the role of a facilities manager, or through shadowing a facilities manager, with an opportunity to influence change and make suggestions for implementing sustainable methods and approaches to facilities management. Large schools or colleges would make good case studies

This is a real opportunity for empowerment of learners, allowing them to see how influential they can be in implementing both small and large changes to running a business or organisation, saving money and resources and reducing the impact that the business or organisation has on the environment.

Where possible, learners should be involved in realistic situations so that their sustainable facilities management practice has an immediate impact. Unit delivery should be underpinned by theory and the use of valid case study materials that will introduce learners to a range of scenarios, that they might otherwise not have the opportunity to explore. For example, companies with good sustainable facilities management and those which have recently improved (eg the Co-op).

## Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topic and suggested assignments/activities and assessment
Introduction and overview of the unit.
Theory: the principles of sustainable facilities management including: <ul style="list-style-type: none"><li>• facilities management functions</li><li>• economic considerations and implications across the range</li><li>• the role of the facilities manager and inherent responsibilities</li><li>• methods and systems used by the facilities manager.</li></ul>
<b>Assignment 1: Principles of Sustainable Facilities Management (P1, P2, M1, D1)</b>
Tutor introduces the assignment brief.
Investigations into factors: resources, economic, workforce, services including: <ul style="list-style-type: none"><li>• exploring the factors in a broad context</li><li>• exploring the factors in a selected business, charity or community project.</li></ul>

## Topic and suggested assignments/activities and assessment

### Assignment 2: Investigating Sustainable Facilities Management Factors (P3, P4, M2)

Tutor introduces the assignment brief.

Theory: the sustainable benefits of improved facilities management through:

- possibilities for improvements
- innovations identified and outlined
- workforce influence and involvement in process
- environmental effects.

### Assignment 3: The Benefits of Sustainable Facilities Management (P5, M3, D2)

Tutor introduces the assignment brief.

Learners research and explore sustainable facilities management roles across a range of businesses, charities and local community projects.

Use of case studies: learners explore the benefits of improved sustainable facilities management.

### Assignment 4: Sustainable Facilities Management Roles (P6, M4, D3)

Tutor introduces the assignment brief.

Learners explore examples of public institutions that may have sustainable facilities managers, eg local councils, large schools, and in businesses, eg supermarket chains.

Review of unit and programme of assignments.

## Assessment

Most learners will need support in gaining access to organisations, businesses or community projects where they can carry out their sustainable facilities management research and development work. Health and safety issues must be considered before learners undertake this unit.

For P1, learners need to explain the economic principles of sustainable facilities management, which will require them to identify how much things cost as a base level against which changes and cost reductions can be measured. Learners should explain how costs might be reduced and the methods used to quantify reductions or trends. This could be completed through a combination of research and a report/article. For M1, learners need to explain methods and systems used in some detail and, for D1, compare and contrast different methods to see what methods are used or can be used to support achievement of sustainable facilities management.

For P2, learners need to discuss the main roles and responsibilities of sustainable facilities management, to improve their understanding of how sustainable facilities management manifests itself in a range of businesses and community situations. Evidence could take the form of a presentation to the group or a report or article linked to P1. Discussions are a useful way for learners to reflect on what they have learned.

To explain factors that make facilities management sustainable for P3, learners need to research at least one organisation/business or community project and show understanding of the principles involved, giving reasons and/or evidence to support their explanation. For P4, learners need to focus on a selected organisation/business and analyse the factors facing the facilities managers in that organisation/business. For M2, learners need to discuss the responsibilities involved in sustainable facilities management for a selected organisation. Evidence could take the form of a presentation and assessor's observation record to confirm learners' achievement.

For P5, learners need to explain, and for M3 compare and contrast, the benefits of improved sustainable facilities management for a selected organisation. Evidence can be through a combination of verbal and written reports where learners draw on evidence and experience gained through earlier activities. For D2, learners need to analyse how issues might undermine sustainable improvements in facilities management. Evidence can be presented as a written or verbal report (supported by an appropriate assessor's observation record to confirm learner's achievement against target criteria).

For P6, learners need to research the jobs market for sustainable facilities management jobs currently available using a range of media including newspapers and the internet. They might also be able to investigate this through links with local businesses and recruitment agencies. By investigating the jobs available and in light of their earlier analyses of sustainable facilities management practice, learners can explain the opportunities for positive change through developing these roles (M4). Learners need to give reasons and/or evidence to support their explanation.

For D3, learners need to evaluate the implications of poor development of sustainable facilities management, either through discussions with employers and organisations or with their peers in the classroom, and then produce a report that accurately highlights the implications.

### Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1, P2, M1, D1	Principles of Sustainable Facilities Management	You are producing a job description for a new role in your company of Sustainable Facilities Manager and must identify the knowledge and experience needed.	Job description. Article.
P3, P4, M2	Investigating Sustainable Facilities Management Factors	You need to plan how facilities management in a company will become sustainable, taking into consideration: resources, economics, workforce and services.	Presentation. Observation record.
P5, M3, D2	The Benefits of Sustainable Facilities Management	You are carrying out market research to explore the benefits of improvements to facilities management through becoming sustainable.	Report or presentation. Observation record.
P6, M4, D3	Sustainable Facilities Management Roles	You are tasked by the 10:10 climate change group with reducing the carbon footprint in your local area. You need to understand the trends in the job market in order to encourage companies and other organisations to develop sustainable facilities management roles so that targets can be met.	Report.

## Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Environmental Sustainability sector suite. This unit has particular links with the following units in the BTEC Environmental Sustainability suite:

Level 3
Understand the Principles of Sustainable Development
Sustainable Communities
Work-related Experience in the Environmental Sustainability Sector

### Essential resources

Learners need access to local organisations, businesses and community groups.

### Employer engagement and vocational contexts

This unit provides an excellent opportunity to strengthen links between centres, employers and community groups. Learners should be encouraged to foster these relationships and identify the beneficial results of their work by creating a range of case studies that will encourage future engagement. Organisations will benefit financially from identifying how to become more sustainable in the area of facilities management.

### Indicative reading for learners

#### Textbooks

Booty F – *Facilities Management Handbook* (Butterworth-Heinemann, 2009) ISBN 9780750689779

Condon P M – *Seven Rules for Sustainable Communities: Design Strategies for the Post-Carbon World* (Island Press, 2010) ISBN 9781597266659

Merkel J – *Radical Simplicity: Small Footprints on a Finite Earth* (New Society Publishers, 2003) ISBN 9780865714731

Rogers H – *Green Gone Wrong: How Our Economy is Undermining the Environmental Revolution* (Verso Books, 2010) ISBN 9781844676453

## Websites

Acre Recruitment	<a href="http://www.acre-resources.com">www.acre-resources.com</a>
Energy Saving Trust	<a href="http://www.energysavingtrust.org.uk">www.energysavingtrust.org.uk</a>
Engauge	<a href="http://www.engaugeonline.co.uk">www.engaugeonline.co.uk</a>
Environment Job	<a href="http://www.environmentjob.co.uk">www.environmentjob.co.uk</a>
Green Jobs	<a href="http://www.greenjobsonline.co.uk">www.greenjobsonline.co.uk</a>
<i>Guardian Jobs</i>	<a href="http://www.jobs.guardian.co.uk/jobs/graduate/environmental-and-sustainability">www.jobs.guardian.co.uk/jobs/graduate/environmental-and-sustainability</a>
Health and Safety Executive	<a href="http://www.hse.gov.uk">www.hse.gov.uk</a>
Freeconomy Community	<a href="http://www.justforthe loveofit.org">www.justforthe loveofit.org</a>
Local businesses reviewed	<a href="http://www.touchlocal.com">www.touchlocal.com</a>
Marks & Spencer's sustainability plan	<a href="http://plana.marksandspencer.com">plana.marksandspencer.com</a>
Pathfinder International	<a href="http://www.pathfinder.co.uk">www.pathfinder.co.uk</a>
<i>Student Times</i>	<a href="http://www.studenttimes.org">www.studenttimes.org</a>
Sustainable Development Commission Link	<a href="http://www.defra.gov.uk/sustainable/government">www.defra.gov.uk/sustainable/government</a>
Team Green Britain	<a href="http://www.teamgreenbritain.org">www.teamgreenbritain.org</a>

## Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are ...
<b>Independent enquirers</b>	explaining the economic principles of sustainable facilities management analysing sustainable factors identifying sustainable facilities management jobs available
<b>Reflective learners</b>	discussing roles and responsibilities of sustainable facilities management, based on research undertaken explaining the factors that make facilities management sustainable
<b>Effective participators</b>	working with a selected business, analysing sustainable factors facing facilities managers explaining the benefits of improved sustainable facilities management for a selected organisation.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
<b>Team workers</b>	undertaking work-related experience in sustainable facilities management gathering data on sustainable facilities management in organisations.

## ● Functional skills – Level 2

Skill	When learners are ...
<b>ICT – using ICT</b>	
Select, interact with and use ICT systems safely and securely for a complex task in non-routine and unfamiliar contexts	researching sustainable facilities management jobs via the internet
Manage information storage to enable efficient retrieval	collating sustainable facilities management jobs gathering data and collating it for assignment use
<b>ICT – finding and selecting information</b>	
Use appropriate search techniques to locate and select relevant information	researching sustainable facilities management jobs via the internet
Select information from a variety of sources to meet requirements of a complex task	researching sustainable facilities management jobs via the internet analysing sustainable factors facing facilities managers
<b>ICT – developing, presenting and communicating information</b>	
Enter, develop and refine information using appropriate software to meet requirements of a complex task	gathering data on sustainable facilities management in organisations
Combine and present information in ways that are fit for purpose and audience	producing reports designing presentations
<b>Mathematics – representing</b>	
Identify the situation or problems and identify the mathematical methods needed to solve them	presenting environmental statistics
<b>English – Speaking, Listening and Communication</b>	
Make a range of contributions to discussions in a range of contexts, including those that are unfamiliar, and make effective presentations	talking with staff in companies and organisations to identify the factors that affect them explaining methods and systems used in sustainable facilities management discussing the benefits of improved sustainable facilities management discussing the opportunities for positive change
<b>English – Reading</b>	
Select, read, understand and compare texts and use them to gather information, ideas, arguments and opinions	researching and selecting sustainable facilities management jobs
<b>English – Writing</b>	
Write a range of texts, including extended written documents, communicating information, ideas and opinions, effectively and persuasively	producing reports and articles.