**Higher National Unit Specification**

**General information for centres**

**Unit title:** Art and Design**:** Sustainability

**Unit code:** F0MT 35

**Unit purpose:** This Unit has been designed to enhance the candidates awareness of the environmental impact their design decisions incur and encourage them to design for sustainability in an ethical and accountable way.

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

1    Research issues connected to sustainability in the area of study.
2    Produce a lifecycle analysis of a product or material.
3    Identify and specify materials or technology for a chosen application that conform to a Design for Sustainability philosophy.

**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:** Access to this Unit is at the discretion of the centre. It would be beneficial if candidates have knowledge of the design process or have equivalent knowledge or experience.

**Core Skills:** There are opportunities to develop the Core Skills of Communication and Information Technology at SCQF level 6 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:** Each Outcome will be assessed separately.

Outcome 1 will be assessed by researching sustainability issues.
Outcome 2 is assessed by the analysis of the lifecycle of a product/material.
Outcome 3 is assessed by specifying material or technologies for a chosen application.

# Higher National Unit specification: statement of standards

**Unit title:** Art and Design**:** Sustainability

**Unit code:** F0MT 35

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.

## Outcome 1

Research the issues connected to sustainability in the area of study.

### Knowledge and/or skills

♦   Research skills
♦   Sustainability issues
♦   Communication

### Evidence Requirements

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

♦   research sustainability issues in relation to a chosen area of design
♦   use a variety of information sources
♦   organise thoughts and opinions about sustainability issues in relation to design

Research evidence should be presented an annotated sketchbook relating to issues of sustainability in the context of design.

The research evidence should be supported by candidate led debate/discussion exploring issues associated with sustainability connected to the candidate's subject area.

### Assessment guidelines

It is recommended that assessment of this Outcome should take the form of a research project followed up by candidate led debate/discussion, or oral/written presentation, exploring issues associated with sustainability relating to the candidate's subject area. It is recommended that discussions be recorded as evidence. Alternatively observation checklists should be used to record evidence.

Should there be ambiguity regarding a candidate's input, oral questioning may be used to eliminate any doubt as to the candidate's understanding. The tutor should note questions and responses.

# Higher National Unit specification: statement of standards (cont)

**Unit title:** Art and Design**:** Sustainability

## Outcome 2

Produce a lifecycle analysis of a product or material

### Knowledge and/or skills

♦ Lifecycle analysis
♦ Products/materials
♦ Environmental impact

### Evidence Requirements

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

♦ research the lifecycle of a product or material relevant to their area of study
♦ produce a lifecycle analysis of a product or material that details its impact on the environment

Evidence should be presented as an illustrated written/oral report.

### Assessment guidelines

The assessment of this Outcome can be in the form of a written report of a minimum of 500 words or equivalent oral presentation.

Checklists may be used to record the evidence.

Should there be ambiguity regarding a candidate's response, oral questioning may be used to eliminate any doubt as to the candidate's understanding. The tutor should note questions and responses.

# Higher National Unit specification: statement of standards (cont)

**Unit title:** Art and Design**:** Sustainability

## Outcome 3

Identify and specify material or technology for a chosen application that conform to a Design for Sustainability philosophy

### Knowledge and/or skills

♦ Research
♦ Materials/technologies
♦ Specifications
♦ Communication
♦ Design for Sustainability philosophy

### Evidence Requirements

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

♦ identify materials or technologies for a chosen application
♦ produce a specification for material or technology for a chosen application
♦ produce a specification that conforms to a Design for Sustainability philosophy

Evidence should be presented as an illustrated written/oral report.

### Assessment guidelines

The assessment of this Outcome can be in the form of a written report of a minimum of 1,000 words or equivalent oral presentation. Checklists may be used to record the evidence.

Should there be ambiguity regarding a candidate's response, oral questioning may be used to eliminate any doubt as to the candidate's understanding. The tutor should note questions and responses.

## Administrative Information

**Unit code:**                       F0MT 35

**Unit title:**                      Art and Design**:** Sustainability

**Superclass category:**             JA

**Original date of publication:**    August 2007

**Version:**                         01

**History of Changes:**

| Version | Description of change | Date |
|---------|----------------------|------|
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**Source:**                    SQA

# Higher National Unit specification: support notes

## Unit title: Art and Design: Sustainability

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

The Unit is intended to develop the candidates knowledge and understanding of the importance of designing for sustainability. This will help to inform the design decisions they make and encourage them to work in an ethical and accountable way.

Design for Sustainability is a term that is interchangeable with terms such as Green Design, Eco-Design or Design for Environment. Its role in improving the quality of life for everyone, including future generations, is one that candidates should become fully aware of.

## Guidance on the delivery and assessment of this Unit

This is an optional Unit within the HNC/D 3D Design Group Award framework. It is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

The Unit is primarily designed to provide the candidates with knowledge and skills relating to a career in art or design and an understanding of the role of sustainability in making design decisions in a responsible and professional way.

Opportunities may be taken to link or integrate with other aspects of the course and a thematic approach adopted for both delivery and assessment.

**Outcome 1**

Through lectures and tutor led discussion, the topic of Design for Sustainability should be introduced and its impact on the candidate's area of study discussed. Following a period of research in a given area candidates will participate in a discussion/debate exploring the issues involved. This may be recorded as candidate evidence, or further questioning can be used to ensure knowledge and understanding. Alternatively, candidates could complete a short written/oral report.

**Outcome 2**

Through research and analysis candidates will undertake a lifecycle analysis of a given product or material. The area to be covered will be linked to their subject of study and the parameters set by the tutor.

**Outcome 3**

Candidates should develop and demonstrate a sound knowledge and understanding of the impact of Design for Sustainability philosophy on the design work that they will produce.

**Higher National Unit specification: support notes (cont)**

**Unit title:**   Art and Design**:** Sustainability

*Opportunities for the development of Core Skills*

Formative input should encourage candidates to research and define the issues connected to sustainability in the area of study prior to the discussion and debate for Outcome 1. Skills in accessing and evaluating sources, including the internet, on concerns, issues and ideas will be developed, in order that candidates use current information as a basis for the lifecycle analysis required. Evaluation of information accessed could include a check on authority, accuracy, and balance.

Although skills in communication are not formally assessed, candidates could be provided with checklists detailing reporting requirements. They should express essential ideas and information accurately and coherently, reach justified conclusions, use a formal structure and check language, spelling, punctuation and syntax for accuracy. Using up to date software packages for word processing and editing where practical will support the development of skills to a professional standard.

If discussion or oral presentation is used to provide evidence of competence, candidates should also be encouraged to:

♦   adapt language and style to the needs of listeners
♦   use appropriate pace and tone
♦   use effective non-verbal communication
♦   use audio visual support confidently
♦   respond to in depth questioning confidently and accurately

# Open learning

This Unit could be delivered by open learning. However it would require planning by the centre to ensure sufficiency and authenticity of candidate evidence.

For further information and advice please refer to the SQA document *Assessment and Quality Assurance for Open and Distance Learning* which is available on SQA's website: **www.sqa.org.uk**.

# Candidates with disabilities and/or additional support needs

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. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (**www.sqa.org.uk**).

# General information for candidates

## Unit title:  Art and Design: Sustainability

This Unit will introduce to you to the area of Design for Sustainability and encourage you to take responsibility in an ecological way for the design decisions you take.

In Outcome 1 you will research issues of sustainability for design, connected to your area of study, and participate in a debate or discussion to present your findings or alternatively you may be asked to present a report.

In Outcome 2 you will produce a lifecycle analysis of a product or material. For this you will look at the design of a product to find out what environmental impact it has before, during and after it is used.

For Outcome 3 you will be asked to specify products, materials or processes, for a set project, which will have the least environmental impact.