



National Unit specification

General information

Unit title: Produce a Work Plan for a Conservation or Restoration Project (SCQF level 6)

Unit code: H8WR 46

Superclass: TD

Publication date: February 2015

Source: Scottish Qualifications Authority

Version: 01

Unit purpose

This Unit is suitable for learners with limited experience in the construction and heritage industries who wish to gain knowledge and understanding of conservation/restoration, repair and maintenance of traditional (pre-1919) structures.

It is also suitable for learners from the construction and related service industries and trades, both skilled manual professions and non-manual professions, who wish to gain knowledge and understanding of conservation/restoration, repair and maintenance of traditional (pre-1919) structures in relation to their pre-existing competencies.

This Unit has been designed to develop the learners' ability in the understanding of conservation/restoration, repair and maintenance projects. It also develops the learners' knowledge and understanding of how traditional buildings perform and function, and the principles of conservation/restoration.

Outcomes

- 1 Demonstrate knowledge of traditional buildings and structures and how they function.
- 2 Demonstrate knowledge of the principles of conservation.
- 3 Inspect a traditional building or structure and develop a work plan.

National Unit specification: General information (cont)

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Credit points and level

0.5 National Unit credit at SCQF level 6: (3 SCQF credit points at SCQF level 6)

Recommended entry to the Unit

Entry is at the discretion of the centre, however it may be beneficial if the learner had some industry experience and knowledge.

Core Skills

Achievement of this Unit gives automatic certification of the following Core Skills component:

Complete Core Skill None

Core Skill component Critical Thinking at SCQF level 5

There are also opportunities to develop aspects of Core Skills which are highlighted in the Support Notes of this Unit specification.

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.

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.

National Unit specification: Statement of standards

Unit title: Produce a Work Plan for a Conservation or Restoration Project (SCQF level 6)

Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

Outcome 1

Demonstrate knowledge of traditional buildings and structures and how they function.

Performance Criteria

- (a) Identify traditional building fabric, materials and components.
- (b) Identify how traditional buildings were designed to perform.

Outcome 2

Demonstrate knowledge of the principles of conservation.

Performance Criteria

- (a) Identify historic and archaeological values, legislation and definitions related to traditional structures.
- (b) Explain the principles of minimum intervention and reversible alterations.
- (c) Explain conjecture with reference to traditional buildings and heritage values.

Outcome 3

Inspect a traditional building or structure and develop a work plan.

Performance Criteria

- (a) Inspect a traditional building or structure.
- (b) Develop a work plan.

National Unit specification: Statement of standards (cont)

Unit title: Produce a Work Plan for a Conservation or Restoration Project (SCQF level 6)

Evidence Requirements for this Unit

Evidence is required to demonstrate that learners have achieved all Outcomes and Performance Criteria.

Written and oral recorded evidence is required to demonstrate that the learner has achieved Outcomes 1, 2 and 3 and their Performance Criteria.

Outcome 1

Demonstrate knowledge of traditional buildings and structures and how they function.

Performance Criteria

(a) Identify traditional building fabric, materials and components.

Evidence must be provided to show that learners have an understanding of:

- ◆ the reasons 1919 is commonly accepted as the date that demarks when building methodology changed from traditional.
- ◆ the relationship between local underlying geology and indigenous materials used for construction.
- ◆ how traditional building materials vary regionally.
- ◆ how materials were traditionally transported to a construction site and the distances travelled.
- ◆ the relationship between how materials were acquired and the energy used to acquire them.
- ◆ the relationship between traditional materials, construction methods and the limitations this had on the type and style of building and structure.
- ◆ the original intended purpose of a structure and its appearance.
- ◆ how traditional buildings were designed ie evolved vernacular architecture and architect designed.
- ◆ how to read a traditional building or structure, recognise the original building design and fabric, and differentiate between that and later additions and alterations.
- ◆ how to identify alterations and additions to the original structure that effect how the structure performs.

National Unit specification: Statement of standards (cont)

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Performance Criteria

(b) Identify how traditional buildings were designed to perform.

Evidence must be provided to show that learners have an understanding of:

- ◆ how traditional buildings were designed to function in terms of how they were intended to be heated and ventilated.
- ◆ how heating and ventilation affected the overall designs of a building and their relationship with the original building materials.
- ◆ how original building materials and heating and ventilation affected the original design for both vernacular architecture and for more architect designed traditional buildings.
- ◆ how traditional buildings were designed to function in terms of withstanding climate and weather patterns, evidencing how traditional buildings coped with more extreme weather patterns.
- ◆ how traditional buildings were designed to shed rain water, to retain heat and how excess heat was lost.
- ◆ how prevailing weather patterns affected design.
- ◆ how the location, local geography and other factors affected the design.
- ◆ how traditional building materials expand and contract according to different micro-climates.
- ◆ how expansion and contraction rates of different materials vary and how the interfaces between these different materials affects longevity.
- ◆ how location and orientation affects the micro-climates faced in traditional buildings.

Performance Criteria

(c) Explain how the use of inappropriate materials and repair methodology has a negative effect on traditional buildings.

Evidence must be provided to show that learners have an understanding of:

- ◆ what constitutes inappropriate materials to use for repairs to traditional buildings and why materials may be inappropriate. They must identify why a material is potentially inappropriate in terms of performance, appearance and, if relevant, historic integrity.
- ◆ what constitutes inappropriate repair methodology and technique in terms of how the existing building fabric and materials adjacent to, and associated with, the repairs undertaken are affected.
- ◆ how the differing performance of repair materials used as alternatives to the original have an effect on surrounding materials and how this can affect the buildings overall performance and the longevity of surrounding building materials and components.
- ◆ the whole-life-costs of construction projects and how repair and maintenance of traditional buildings contributes to sustainability practices.
- ◆ the value of regular maintenance and the value of establishing a maintenance plan for a traditional building.

National Unit specification: Statement of standards (cont)

Unit title: Produce a Work Plan for a Conservation or Restoration Project (SCQF level 6)

Outcome 2

Demonstrate knowledge of the principles of conservation.

Performance Criteria

(a) Identify historic and archaeological values, legislation and definitions related to traditional structures.

Evidence must be provided to show that learners have an understanding of:

- ◆ relevant regulations and control measures associated with traditional buildings, such as conservation plans, scheduled monument status, the different listed building statuses and conservation area status.
- ◆ how these different allocations affect what can and cannot be done to a traditional building including alterations and repair and maintenance work.
- ◆ how protected flora and fauna within, or in the vicinity of, any structure can have an effect on what work can and cannot be carried out.
- ◆ how endangered/protected flora and fauna can be identified and the reporting procedures.
- ◆ the historic and archaeological integrity of a traditional building or structure.
- ◆ the needs of all other occupations associated with any work undertaken.

Performance Criteria

(b) Explain the principles of minimum intervention and reversible alterations.

Evidence must be provided to show that learners have an understanding of:

- ◆ the reasons for minimum intervention with, and maximum retention of the existing traditional building and building materials.
- ◆ what constitutes reversible intervention to the original building fabric.
- ◆ how and why any interventions or alterations should be reversible.
- ◆ appropriate ways to carry out work on traditional buildings.
- ◆ how and why unnecessary damage to the original building fabric must be avoided.
- ◆ what constitutes damaging alterations to a traditional building.
- ◆ how damaging alterations can be removed, altered or adapted to minimise any future potential damage.
- ◆ how to integrate new constructional components and finishes with the original building fabric harmoniously.
- ◆ how to record any work carried out using written, photographic and digital methods.

National Unit specification: Statement of standards (cont)

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Performance Criteria

(c) Explain conjecture with reference to traditional buildings and heritage values.

Evidence must be provided to show that learners have an understanding of:

- ◆ when, how and from where instructions and/or clarification must be sought for work on a traditional building.
- ◆ sources of information on research into the use of new, alternative and untried materials and interventions on traditional buildings.
- ◆ when instructions and/or clarification must be sought to ensure work is carried out safely and effectively in relation to personal safety and health, wider human safety and health, and the safety and health of the traditional building.
- ◆ who relevant people, organisations and sources are to gain advice and information from regarding understanding of traditional historical buildings.
- ◆ appropriate ways of stopping work when doubt occurs regarding existing construction.
- ◆ personal responsibilities relating to safeguarding the original fabric of the building.

Outcome 3

Inspect a traditional building or structure and develop a work plan.

Performance Criteria

(a) Inspect a traditional building or structure.

Evidence must be provided to show that learners have inspected a traditional building or structure, that requires conservation/restoration repair work, and applied understanding gained from Outcomes 1 and 2 in a practical context. The work required can relate to the whole building or structure or a specific area of traditional building conservation repair.

Learners must provide evidence that they can:

- ◆ identify the historic importance of a structure by appraising the whole structure and establish any conservation status.
- ◆ identify the repairs required to specified items related to a construction trade or job role by inspecting the current condition of the structure or the traditional building components pertinent to a specific trade, craft or job role.
- ◆ record all relevant areas of the structure related to a specific trade or job role that require repair.
- ◆ identify the appropriate types of repair for the relevant damaged and decayed parts of the structure.
- ◆ identify the appropriate methods to be used for each repair.
- ◆ identify any previous alterations, interventions and repairs to the original building that have been undertaken.

National Unit specification: Statement of standards (cont)

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- ◆ identify any previous potentially damaging alterations, interventions and repairs that should be removed.
- ◆ identify how to remove existing damaging materials minimising any further potential damage to the existing structure.
- ◆ identify any potential impact on the needs of other occupations associated with the identified repair work that is to be carried out.
- ◆ identify tools, equipment and access equipment requirements to carry out repair work.
- ◆ establish what materials needs there are to carry out repair work.
- ◆ establish what original materials and structural components are salvageable and how and where they can be stored to minimise potential damage.
- ◆ establish what are the best available like-for-like materials.
- ◆ define what new materials and construction components and finishes are required and how they can be best integrated with the original building fabric.
- ◆ identify what repair work must be done in-situ and what components can be removed for repair off-site.

Performance Criteria

(b) Develop a work plan for conservation, repair work required on the inspected traditional building.

Evidence must be provided to show that learners can:

- ◆ identify what conservation and restoration/repair work is required to specified areas of the traditional building.
- ◆ differentiate between conservation work and restoration work.
- ◆ develop the findings from the inspection process of Outcome 3, Performance Criteria (a) into a range of alternative work plans.
- ◆ prioritise the range of work plans created to produce best fit for differing budgets and long term sustainability of the traditional building inspected.

In the completion of this Unit all working practices must be in accordance with current and relevant health and safety legislation and regulations.

The following health and safety regulations, acts, approved codes of practice and any amendments or updates made by statutory bodies apply to all Outcomes in this Unit:

- ◆ Health & Safety at Work Act 1974
- ◆ The Personal Protective Equipment at Work Regulations 1992 (as amended)
- ◆ Provision and Use of Work Equipment Regulations 1998 (as amended)
- ◆ The Construction (Design & Management) Regulations 2007
- ◆ The Control of Substances Hazardous to Health 2002 (as amended)
- ◆ The Lifting Operations and Lifting Equipment Regulations 1998(as amended)
- ◆ The Work at Height Regulations 2005
- ◆ The Management of Health and Safety at Work Regulations 1999 (as amended)
- ◆ The Manual Handling Operations Regulations 1992 (as amended)

National Unit specification: Statement of standards (cont)

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Evidence for Outcomes 1 and 2 should be obtained under closed-book, controlled, supervised conditions at appropriate points in the Unit.

For Outcome 3, learners will be presented with a real or simulated project and will be given a clear brief to ensure that they have the opportunity to achieve all the Performance Criteria.

Product evidence and performance evidence supported by an assessor observation checklist is required to show that the learner has achieved the standard specified in Outcome 3 and all related Performance Criteria.

The product evidence will be the learners completed work plan.



National Unit Support Notes

Unit title: Produce a Work Plan for a Conservation or Restoration Project (SCQF level 6)

Unit Support Notes are offered as guidance and are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 30 hours.

Guidance on the content and context for this Unit

This Unit has been developed as a mandatory Unit in the National Progression Award in the Conservation of Masonry at SCQF level 6. It can also be delivered as a free-standing Unit.

Much previous long-term damage to traditional structures has been caused by well-intentioned, but inappropriate or poorly-considered application of skills and materials through a lack of understanding. This Unit provides underpinning understanding and knowledge to help prevent future long term damage to traditional structures being carried out by those who successfully complete the Unit.

Learners successfully completing this Unit will gain knowledge and understanding relevant to appraising the historic and cultural significance of traditional (pre-1919) structures, their current condition, the relevance and source of the original building materials and how traditional structures were originally designed to perform and function. Learners will also develop the underpinning knowledge and understanding relating to the practical application of skills for working on conservation and restoration projects. The Unit has been written with Historic Scotland expert input and is recognised by Historic Scotland and the National Trust for Scotland.

The Unit is suitable for learners with limited experience in the construction and heritage industries who wish to gain knowledge and understanding of conservation/restoration, repair and maintenance of traditional (pre-1919) structures.

It is also suitable for learners from the construction and related service industries and trades. It is applicable to skilled manual professions and non-manual professions. The skills are transferable within different working environments, but the Unit is aimed at learners whose normal work is related directly to a site, conservation/restoration project, or a similar working environment.

The Unit is applicable to all areas of construction or other related industries, specifically (but not exclusively) work related to; brickwork, carpentry and joinery, decoration, earthen structures, iron/metal work, lead work, plastering, roofing, stonemasonry, and wall and floor tiling. The Unit has been developed to be complimentary to Units for all areas of construction or related industries related to work on traditional structures.

National Unit Support Notes (cont)

Unit title: Produce a Work Plan for a Conservation or Restoration Project (SCQF level 6)

This Unit has been developed as a replacement for Unit:

GO/PCBHv0.5 (F2FW 12) *Principles of Conservation in the Built Heritage (SCQF level 6).*

This Unit has been developed for learners to gain knowledge and understanding related to National Occupational Standard (NOS) VR546 *Working on Conservation and Restoration Projects*. It is also applicable to other relevant NOS within the CITB Heritage Skills suite of NOS.

Successful completion of this Unit provides learners with knowledge and understanding required for working on conservation/restoration repair and maintenance projects.

This Unit provides underpinning knowledge related to the Recommended Qualifications Structure (RQS) for SVQ's in Heritage Skills suite as provided by the CITB.

This Unit is relevant and provides underpinning knowledge for progression to HNC/HND qualifications in the conservation and restoration of traditional (pre-1919) structures.

Guidance on approaches to delivery of this Unit

The achievement of skills and underpinning knowledge required for this Unit will be assisted by the provision of information sources in the form of: oral and/or written instructions; graphic and photographic materials; technical information; codes of practice; building standards; statutory regulations and various publications from Historic Scotland, English Heritage, the Society for the Protection of Ancient Buildings, the Institute of Historic Building Conservation, Professional Bodies and other relevant sources.

It is recommended that Outcomes 1 and 2 are delivered first in order to put what has been learned from these Outcomes into practise in the delivery of Outcome 3.

Outcomes 1 and 2 can potentially be delivered entirely in a classroom type environment, but there will always be a benefit in first hand experiential learning from a real life site.

Similarly Outcome 3 could potentially be delivered in a classroom environment, but it is recommended that a real life site is used to practice the learning gained from the first two Outcomes. Production of a work plan is recommended as evidence for this Outcome. This report can focus on the trade or area of building material or profession that the learner has best pre-existing knowledge of. For example those with a masonry background can focus on the current condition and a repair plan for the masonry in a practice structure. Those with a carpentry and joinery background can focus on the current condition of wooden parts of the structure. The same applies to all relevant areas of traditional building conservation/restoration repair and maintenance.

National Unit Support Notes (cont)

Unit title: Produce a Work Plan for a Conservation or Restoration Project (SCQF level 6)

Guidance on approaches to assessment of this Unit

Evidence can be generated using different types of assessment. The following are suggestions only. There may be other methods that would be more suitable to learners.

Centres are reminded that prior verification of centre-devised assessments would help to ensure that the national standard is being met. Where learners experience a range of assessment methods, this helps them to develop different skills that should be transferable to work or further and higher education.

Outcomes 1 and 2 must be assessed through at least the use of closed-book multiple-choice type question papers, a single combined question paper for both Outcomes 1 and 2 could be considered.

Outcome 3 as a practical exercise must be recorded on an observation checklist. Clear feedback, both verbal and written, must be given to the learner during, and on completion of the assessment.

This Outcome ensures that what has been learned in Outcomes 1 and 2 has been put into practise in the inspection of a traditional building and in the production of a work plan.

The work plan itself can be produced entirely by individual learners, however a pro-forma type work plan can be considered for learners to complete, so they can concentrate efforts on what evidence they're looking for and not on how it is to be presented.

Feedback should be provided to learners, this and all assessment material will be subject to internal and external verification.

Opportunities for e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

National Unit Support Notes (cont)

Unit title: Produce a Work Plan for a Conservation or Restoration Project (SCQF level 6)

Opportunities for developing Core and other essential skills

Elements of the Core Skill of *Problem Solving*, that is, Critical Thinking, Planning and Organising, and Reviewing and Evaluating, could be effectively developed and enhanced in the Unit, which requires the application of theoretical knowledge to a practical task.

Identifying and examining the relevance of all factors at various stages of understanding conservation repair and maintenance of traditional structures and in completing a work plan will be essential to ensure successful results.

Initially learners will have to establish the extent of repair needed before analysing requirements for materials in a range of environmental and seasonal contexts, which will involve a high level of critical thinking.

The ability to identify appropriate materials, test their properties, and select solutions which use appropriate approaches to working is a critical competence. Learners will devise an appropriate and safe approach to work, based on assessment of performance characteristics, and demonstrate that they can comply with current and relevant Health and Safety legislation and regulations.

Formative group discussion of issues such as site requirements, and the impact of environmental and seasonal factors may be useful to support decision making although learners should independently identify and determine best practice. Class discussions with assessor support during formative work could encourage the analytical evaluation of typical repair plans and would also be of value in developing problem solving skills.

The ability to calculate and consider the implications of data which may be presented numerically and graphically will underpin the competencies developed in the Unit. Learners have to focus on practical analysis and calculation to determine and test the effects of exposure, environmental, and seasonal influences on the performance of existing and new repair materials. Knowledge and understanding of the mechanisms and effects of decay will be critical to the formulation of sound repair plans. Practical exercises to support development of skills in the calculation and presentation of data could be undertaken as part of formative work and integrated with other work across the award, with an emphasis on Numeracy as a tool to be used and applied efficiently and critically in working contexts. The provision of appropriate reference materials in numeric and graphic format would assist this process.

This Unit has the Critical Thinking component of Problem Solving embedded in it. This means that when candidates achieve the Unit, their Core Skills profile will also be updated to show they have achieved Critical Thinking at SCQF level 6.

History of changes to Unit

Version	Description of change	Date

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General information for learners

Unit title: Produce a Work Plan for a Conservation or Restoration Project (SCQF level 6)

This section will help you decide whether this is the Unit for you by explaining what the Unit is about, what you should know or be able to do before you start, what you will need to do during the Unit and opportunities for further learning and employment.

This Unit is about understanding conservation/restoration, repair and maintenance of traditional (pre-1919) structures.

It is suitable for those with limited experience in the construction and heritage industries who wish to gain knowledge and understanding of conservation/restoration, repair and maintenance of traditional (pre-1919) structures.

It is also suitable for those with existing competencies in the construction industries who wish to be able to apply existing competencies to the conservation/restoration, repair and maintenance of traditional structures.

It has been designed to develop your abilities in the understanding of conservation/restoration, repair and maintenance projects. It will also develop your knowledge and understanding of how traditional buildings perform and function, and the principles of conservation/restoration.

Successful completion of this Unit will provide you with the underpinning knowledge for working on conservation and restoration projects.

On completion you will be able to appraise the condition of a traditional structure referencing pre-existing skills and knowledge. You will understand how to apply pre-existing relevant skills to traditional (pre-1919) structures sympathetically and harmoniously with the existing structure so as to minimise any future potential for long term damage caused by applying these skills.

Assessment is through completion of closed-book multiple-choice questions and in the provision of a work plan for an example traditional structure, this work plan can be specific to a pre-existing relevant trade skill and relevant associated materials.

Elements of the Core Skills of *Problem Solving*, that is; Critical Thinking, Planning and Organising, and Reviewing and Evaluating, will be developed in the successful completion of this Unit, but they will not be assessed or certificated.

The Unit is valuable in the potential development of enterprise, employability and citizenship in the repair and maintenance part of the construction sector, specifically in respect of traditional structures, which in turn is relevant in sustainability and sustainable development, as traditional structures are principally constructed of indigenous local materials and in many cases have survived in daily use for over a century or longer and will continue to do so for centuries more — but only provided they are cared for competently. This Unit provides underpinning knowledge and understanding to gain relevant competency.