



# MCAST

Malta College of Arts, Science & Technology

MQF Level 5

CE5-01-19

**MCAST Higher Diploma in Masonry Heritage Skills  
(Kapumastru)**

**Course Specification**

## **Course Description**

The demand for the conservation and restoration of stone monuments and of historic buildings and artefacts is increasing. Likewise, who manage projects involving various building materials besides limestone elements, are also in great demand.

This course is intended for those who endeavour scientific research to gain knowledge and techniques appropriate for our local limestone and ambient conditions, while at the same time applying hands on techniques to demonstrate best practices on site.

This course also covers quantity surveying applied to restoration projects and an introduction to project management to lead and manage technicians working on restoration projects.

## **Programme Learning Outcomes**

At the end of the programme the learner will be able to:

- 1. Carry out a risk assessment of the surrounding working environment and assist in identifying particular health and safety issues of specific operations*
- 2. Lead and coordinate conservation teams to meet the technical and managerial requirements*
- 3. Produce estimates and work schedules from drawings and specifications and from on-the-job surveys*
- 4. Draw specifications and method statements related to project approval documents*

## **Entry Requirements**

MCAST Diploma in Masonry Heritage Skills (Mastru) - Level 4

or

Other related MCST Level 4 courses (under guidance)

or

2 A-Level passes and 2 I-Level passes

## Current Approved Programme Structure

<b>Unit Title</b>	<b>ECVET/ECTS</b>
Cleaning Techniques	6
Conservation and Restoration Theory	6
Health and Safety at Work	6
Historic Construction Technology	6
Materials Science	6
Restoration Documentation	6
Restoration Project	6
Restoration Maintenance and Repair Techniques	12
Stone Dressing	12
Business Development	6
Quantity Surveying	6
Research Project including Research Methods	12
Restoration Site Management	6
Scaffolding	6
Synoptic Project	12
English	6
<b>Total ECVET/ECTS</b>	<b>120</b>

\*Unit Introduction to Physics and Chemistry (Level 4) to be added to transcript as extra

## Cleaning Techniques

**Unit level (MQF): 5**

**Credits: 6**

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### Unit Description

This unit has been designed for candidates who wish to work or currently work in the industrial field of conservation masonry. The Unit is suitable for candidates from the construction and related service industries and trades. The skills are transferable within different working environments but the Unit is aimed at candidates whose normal place of work would be a site, a conservation project or a similar working environment. The unit can be utilised for the hand skills and theoretical background for historical materials cleaning. There will be various techniques of stone cleaning identified to allow a greater understanding of the most appropriate cleaning system matching the background type.

This unit will build on the previous knowledge gained in Cleaning Techniques 2 and introduce students to the concept of using “the gentlest means possible” and to illustrate and define the importance of material investigation.

Candidates will develop knowledge and understanding of stone cleaning and its impact on performance. They will also be able to explain the impact of a number of issues relating to building performance (compatibility, location, exposure, environment and seasonal influence) They will also be able to explain the development of stone cleaning technology and evaluate the importance of cleaning for repair of historic buildings. They will also demonstrate the ability to differentiate between various types of cleaning techniques used when dealing with historic buildings and the terminology used. Candidates will also be able to select a suitable method for stone cleaning for historic buildings and be able to demonstrate a basic appraisal process for stone cleaning specification.

Candidates successfully completing this Unit will understand the impact of limestone use on technology and the environment. Candidates who complete this Unit may then go to work on a site or conservation project or a similar working environment.

## Learning Outcomes

On completion of this unit the learner will be able to

1. *Determine the two main methods and their subsidiary techniques for stone cleaning.*
2. *Determine the causes of soiling, the process and impact of stone cleaning on building performance.*
3. *Examine properties and characteristics of stone cleaning, in particular quality vernacular stone.*
4. *Determine the development of stone cleaning technology.*

## Conservation and Restoration Theory

**Unit level (MQF): 5**

**Credits: 6**

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### Unit Description

This unit has been designed for candidates who wish to work or currently work in the industrial field of conservation masonry. The Unit is suitable for candidates from the construction and related service industries and trades. The skills are transferable within different working environments but the Unit is aimed at candidates whose normal place of work would be a site, a conservation project or a similar working environment.

This unit will build on the knowledge gained in Conservation Theory 2, and further introduce students to the concept of building conservation and to illustrate and define the responsibilities of the various players and stakeholders involved in a conservation and restoration project.

Candidates will develop knowledge and understanding of use his judgement during their work and identify the parameters up to which such judgement can be taken on their own and when and how would a professional input should be requested.

They will also be able to explain the development of spatial planning policies regulating such areas and evaluate the importance of the necessary preparatory building conservation legislation on successful repair of a historic building. They will also demonstrate the ability to differentiate between the various terms used in conservation such as preservation; restoration; preventive conservation; scientific conservation; expressive conservation and sustainable conservation. Candidates will also be able to select suitable conservation interventions for historic buildings determined not only on its own merits but also in its context and be able to demonstrate a basic understanding of the concepts of urban conservation and rural conservation. Candidates successfully completing this Unit will understand the principles of urban planning. Candidates who complete this Unit may then go to work on a site or conservation project or a similar working environment.

## Learning Outcomes

On completion of this unit the learner will be able to

1. *Define the responsibilities of the various players and stakeholders involved in a conservation and restoration project.*
2. *Demonstrate knowledge and understanding of professional judgment with regards planning and conservation legislation, ethics and principles.*
3. *Inspect a historic building and its context and determine a suitable conservation intervention.*
4. *Develop a conservation intervention strategy for a specific historic building.*

## Health and Safety at Work

**Unit level (MQF): 5**

**Credits: 6**

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### Unit Description

The unit will deal with the management of Health and Safety of Built Heritage. Further, on the basis of knowledge provided about the cost implications of accidents, it is intended that the student will be enabled to prepare risk analyses and appropriate method statements for works. The student will be introduced to and provided with foundation knowledge in how to assess risks with the practical application of why risk analysis is necessary to identify its relative importance.

Learners will become familiar with concepts of Health and Safety and accident prevention such as the degree of risk being associated and dependent on the likelihood of the accident/incident occurring and the probable severity of the consequence of that accident or incident. In addition, the specifics of legislative needs of scaffolding will be considered. It is essential that reflecting current legislation that those employed within conservation or employment within a place of construction or heritage is aware of the responsibilities that exist through their own actions and the actions of others. With a particular aspect towards heritage sites; a study of Health and Safety allows learners to appreciate and contextualise the satisfying of not only statutory legal or contractual requirements, but also of how to provide a safe environment for themselves, perhaps those who may be in their employment, other workers and the general public. The responsibility for safe procedures, planning and actions are underpinned throughout this Unit and the learner will benefit from the study of safe working practices with a particular emphasis in their vocational area. The knowledge and skills derived from this Unit are transferable across other areas of construction and employment where the learner will be exposed to risk and environmental hazards through the use of tools, working at height or exposure to construction and general building environments. The areas addressed within the unit provide the learner to achieve best practice and safe working leading to them achieving standards making them responsible and safe employees.

## Learning Outcomes

On completion of this unit the learner will be able to

1. *Understand the implications of current Health and Safety at Work legislation as it applies to a historic work site and the cost implications of accidents and dangerous occurrences to Projects and employers.*
2. *Write a risk assessment on the basis of a Health and Safety plan including a Safe Work Method Statement.*
3. *Understand the EU legislative and safety requirements for common forms of scaffolding, temporary supports and access equipment.*

# Historic Construction Technology

**Unit level (MQF): 5**

**Credits: 6**

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## Unit Description

This unit has been designed for candidates who wish to work or currently work in the industrial field of conservation masonry. The Unit is suitable for candidates from the construction and related service industries and trades. The skills are transferable within different working environments but the Unit is aimed at candidates whose normal place of work would be a site, a conservation project or a similar working environment. This study unit should enhance the learner's understanding and knowledge to more complex forms of construction in order to be able to understand their method of construction. These will include vaults, buttresses, domes, towers, military structures etc. and will encompass Historic Construction technology that can be utilized within the industry.

Through this unit the learner should appreciate the need of knowing the construction history of the building prior to carrying out any intervention. Most of this study unit should be about international construction and its development through different phases in history. There should be a thorough understanding and appreciation of international architecture and the influence this had on the construction technology. They will also demonstrate the ability to identify complex forms of construction, the terminology used and the appropriate architectural age. Candidates will also be able to select the correct level of technology appropriate to different architectural ages. Candidates successfully completing this Unit will have a basic understanding of the influence various construction technologies have had on historic building repair.

Candidates who complete this Unit may then go to work on a site or conservation project or a similar working environment. The methods of teaching will be at the discretion of the delivering centre but must not be detrimental to the contents of the unit.

## Learning Outcomes

**On completion of this unit the learner will be able to**

1. *Differentiate between the more complex forms of construction.*

2. *Examine historic buildings and identify various uses and level of complex technology appropriate to construction.*
3. *Differentiate between elements and features of complex forms of construction of historic buildings.*

# Materials Science

**Unit level (MQF): 5**

**Credits: 6**

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## Unit Description

The purpose of this unit is to develop a material science perspective of materials used in the construction of buildings.

The specification of materials is considered for new projects and heritage projects in the built environment. A range of environments will be assessed and appropriate material specification considered with the objective of affording effective and efficient functionality. The mechanisms that cause materials to deteriorate, when in service, are described and explained. The impact of a range of environmental conditions on different building materials in use, in new and existing buildings, is considered.

Learners will be assessed on accuracy in the correct identification of relevant terms in each of the aforementioned areas related to the deterioration of construction materials.

It is necessary that all work, in relation to the above, is to be carried out in a safe and efficient manner and that it is compliant with current safety standards and procedure. In doing so, the safe use of relevant equipment and resources, involved in any practical demonstrations within the various stages of the unit requirements, will be satisfied.

The specific objectives for this unit are; that the learner undertakes a logical/correct sequence and; that all relevant issues, such as, the properties and property values of building materials, the requirements of building material and component function, the specification of building materials, the environmental deterioration mechanisms of building materials, water and its effects, the causal identification of material and component defects, the identification and significance of information on the environment and anthropogenic pollutants in the environment, the importance of information on meteorological and climatic factors; are each satisfactorily addressed.

## Learning Outcomes

On completion of this unit the learner will be able to

1. *Be familiar with the specification of building materials.*
2. *Be familiar with the main types of material and component decay.*
3. *Understand the impact of the surrounding environment on different building materials.*

## Restoration Documentation

**Unit level (MQF): 5**

**Credits: 6**

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### Unit Description

This unit is designed to make the learner aware of the importance of documentation at all phases of an intervention

The following items should be covered by this unit: historical documentation; chronological documentation of interventions and changes; object description and photographic documentation; graphical and metric documentation; state of preservation of artifact prior to intervention; description of the methodology and materials used

Upon completion of the Unit, the learner should be able to produce a full detailed report containing all the above mentioned methods of documentation.

The learner should be aware of the ethics of restoration (these shall be covered in the History of Restoration unit) The learner should be able to research individual pieces through various mediums to establish any historic tenure. The learner should be able to produce planned documentation for a range of pieces that shows appropriate detail.

The learner should produce documentation that describes the processes that will be undertaken on work examples and detail materials that would be used, the restoration activity would need to be clearly mapped and all this information suitably presented

The learner should be aware of paper documentation but should investigate alternative methods such as video that is now available. The learner should design a template for the documentation of undertaken work which could be applied to all restoration project within a specific field

### Learning Outcomes

**On completion of this unit the learner will be able to**

- 1. Explain the requirement of restoration documentation.*
- 2. Illustrate presentation methods of restoration practices.*

- 3. Produce appropriate documentation for a range of restoration projects.*

## Restoration Project

**Unit level (MQF): 5**

**Credits: 6**

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### Unit Description

This unit is aimed at re-enforcing and gaining further knowledge of masonry heritage skills. Within this unit the learner will encompass knowledge of aspects of building restoration, that can be utilized within the industry. It involves the management to completion of a restoration project from its proper site planning, scheduling of works, actual execution and handing over of the site.

The methods of teaching and presentation will be at the discretion of the delivering centre, but must not be detrimental to the contents of the unit. This unit is seen as being strongly linked with the Unit: Research Project.

The learning is a blend of practical and theoretical work, which will allow the teaching centre a range of teaching and learning styles to be encompassed. The student should have an awareness of construction methods, techniques, materials and personnel involved within the construction industry and in a restoration project in particular. All practices should be relevant to historic building conservation and restoration, as appropriate to local practice. All work should be completed with recognition of current legislation, with reference to the latest scientific research, and good practice should always be adhered to.

Specific objectives for this unit are that the learner undertakes a logical sequence to the tasks involved, addressing relevant issues: such as construction methods and resourcing, personnel and conflict issues, project information, policies/procedures and good communication practices.

Any health and safety issues should be shown on the risk assessment, which should be made available to the student.

## Learning Outcomes

On completion of this unit the learner will be able to

1. *Identify appropriate techniques for the planning and scheduling of works in respect of a restoration project.*
2. *Explain the management procedures of a restoration project, from site possession, through to handover.*
3. *Explain the roles of the major personnel involved in a restoration project.*
4. *Identify statutory and regulatory aspects of a project and the industry.*
5. *Identify the importance of effective documentation and communication in the success of a project.*

# Restoration Maintenance and Repair Techniques

**Unit level (MQF): 5**

**Credits: 12**

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## Unit Description

This unit has been designed to introduce candidates to a range of issues related to the restoration, maintenance and repair of stonework within a masonry heritage context. Candidates will develop a knowledge and understanding of the physical and chemical properties of vernacular building materials and associated deterioration models and processes. They will be able to identify a range of common issues and propose suitable interventions when required. Proposals will be supported by appropriate literature and/or research and alternative interventions will be discussed.

Candidates will also demonstrate knowledge of the repair of structural masonry and other structural elements normally employed in the historic built fabric. They will be expected to identify a range of structural faults and propose and carry out remedial actions in accordance with local legislation and building standards.

The knowledge, understanding and skills required to complete this unit will prepare candidates to restore, maintain and repair masonry structures. This unit aims to give learners the opportunity to gain knowledge, understanding and practical skills necessary to work effectively within this area. Knowledge and skills developed during this unit may be transferable across a number of related units within the Masonry Heritage programme.

## Learning Outcomes

On completion of this unit the learner will be able to

1. *Describe the physical and chemical properties of a variety of natural stones and identify common deterioration processes and models associated with local limestones.*
2. *Describe the differences between restoration, maintenance and repair and propose masonry interventions relevant to each approach.*
3. *Identify a range of structural masonry faults associated with the substructure of historic structures and propose suitable repair, maintenance and restoration interventions associated with superstructure of historic structures.*
4. *Identify a range of structural masonry faults associated with the superstructure of historic structures and propose suitable repair, maintenance and restoration interventions associated with superstructure of historic structures.*
5. *Carry out a range of structural repairs to masonry walling including consolidation, repair, restoration and shoring.*

# Stone Dressing

**Unit level (MQF): 5**

**Credits: 12**

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## Unit Description

This unit is part of the masonry heritage portfolio level 5 and should proceed from the learner gaining the relevant skills from level 4 masonry heritage.

This unit will entail the creation and erection of wrought masonry. The masonry will be of quality for use in Masonry heritage industry. The unit will incorporate the use of modern and traditional methods utilized in industry. The unit will incorporate vernacular methods, techniques and materials but knowledge of other geographical methods techniques and materials would be good practice. The unit should recognize any relevant standards and aim to achieve within these borders. The use of mechanical methods will give the learner a broad view of the industry. The learner will learn to work in a way that is productive and safe. General building methods and procedures will be demonstrated and practiced to allow the learner to develop hand skills which should be enhanced with a site experience. Site practice will allow the learner to develop an understanding of the heritage culture. An association with the professional bodies should be encouraged as this develops an ambition to develop within a particular field. The learner should develop confidence which will enhance the learner's employability.

All aspects of health and safety will be adhered to within the unit. The unit should incorporate any sustainable methods where applicable.

## Learning Outcomes

**On completion of this unit the learner will be able to**

- 1. Understand and utilize mechanical methods for stone production.*
- 2. Produce an ornamental architectural element in stone.*
- 3. Set out and prepare for complex masonry structures.*
- 4. Build complex masonry structures.*

## Business Development

**Unit level (MQF): 5**

**Credits: 6**

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### Unit Description

This unit will give learners the opportunity to find out the skills and qualities they possess that would allow them to start up their own business. They will use methods to reflect on their own personal skills and abilities. They must come up with a business idea and follow that business idea through from start to finish, encompassing all aspects of starting a new business, administrative and procedural.

Become familiar with the different types of communication required when you start a business and how these communication skills will assist in building the reputation of that business. They must look at how they communicate and how it adds value to their business transactions. Understand the leadership qualities one should possess when they start a business and how these leadership qualities play an important part in the success of the business. They should understand how to develop their leadership style and how it will contribute to their business.

Understand markets and be able to adapt to changes in markets to ensure business success. They must also be able to recognise a failing business and how to avert failure. Create and build a reputable product or service, giving details on how the product/service will be sold, the benefits for customers and how customers view the product/service. Think of innovative ways to promote and sell their product to distinguish their product from competitors. Be able to explain why customers would choose this particular product over another.

Understand the financial aspects of the business and how they affect start up. Understand how much will be required for start-up and why, compile information on how they will finance this start up and then provide detailed financial information. Be able to provide information on the legal aspects required for a business.

Be able to analyse the existing market and sell your product/service effectively to your target customer using the best methods for your particular product.

### Learning Outcomes

**On completion of this unit the learner will be able to**

- 1. Assess individual personal qualities in the context of business start-up.*
- 2. Evaluate the benefits of being self-employed.*

3. *Develop a business plan.*

# Quantity Surveying

**Unit level (MQF): 5**

**Credits: 6**

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## Unit Description

This unit is aimed at re-enforcing and gaining further knowledge of masonry heritage skills. Within this unit the learner will encompass introductory knowledge of procurement and contract forms that can be utilized within the industry. The methods of teaching will be at the discretion of the delivering centre, but must not be detrimental to the contents of the unit.

The learners will be assessed on their accurate knowledge of currently practised strategies of procurement for restoration projects and associated standard forms of contract. Explanation of rights and obligations, compliance and dispute resolution is also required.

The learning is a blend of practical and theoretical work, which will allow the teaching centre a range of teaching and learning styles to be encompassed. The student should have an awareness of personnel involved within the construction industry. Previous successful study of Quantity Surveying 2 is required. All practices should be relevant to historic building conservation and restoration, as appropriate to local practice. All work should be completed to current legislation, with reference to the latest standard forms of contract, and good practice should always be adhered to.

Any health and safety issues should be shown on the risk assessment, which should be made available to the student.

## Learning Outcomes

**On completion of this unit the learner will be able to**

- 1. Identify an appropriate procurement strategy.*
- 2. Evaluate and select an appropriate standard form of contract.*
- 3. Describe the rights and obligations of the parties under the latest JCT standard form of contract and the provisions for non-compliance.*
- 4. Describe the procedures available for dispute resolution under the latest JCT standard form of contract.*
- 5. Describe public sector procurement procedures under Regulation L.N.296-2010.*

## Research Project including Research Methods

**Unit level (MQF): 5**

**Credits: 12**

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### Unit Description

The student shall initially investigate and report on the essential elements and methodologies which require to be considered in the initiation, formulation, production and presentation of a restoration intervention research project. Thereafter, the student shall incorporate the knowledge and experience gained in the formulation of the research project methodology project report in the production of a professional scientific research project report relating to one aspect of a masonry heritage restoration intervention incorporating the appropriate use of relevant diagnosis, prognosis, current and alternative identification and application of the chosen conservation strategy including appropriate techniques, processes and procedures.

This unit provides a framework for students to develop an understanding of the various elements which must be considered in the production of investigative research. The use of accepted practices and models of development in the initiation of hypothesis or research topic formulation and development will allow the student to establish rationale and clear thinking processes designed to provide a platform for development of critical assessment of accepted thinking and practise within the selected area of study.

The investigation of the chosen area of research paradigm allows the student to examine the current conceptual model, assumptions, values, and practices that constitute the a way of viewing reality for the masonry heritage restoration and conservation community with the development of in depth knowledge of the subject area presenting the student with the opportunity to begin to formulate alternative strategies in the chosen aspect of a masonry heritage restoration intervention with the potential to originate new thinking and challenge the accepted norm.

The Unit will engender the student with a solid grounding in the formulation and production of research methodology as well as providing a platform for the student to exercise the practical skills in relation to data procurement from reliable sources, the incorporation and use of appropriate and relevant surveying strategies and the application of the chosen conservation masonry heritage restoration intervention techniques, processes and procedures preparing the student for subsequent research project formulation, production and presentation.

## Learning Outcomes

On completion of this unit the learner will be able to

### Theme 1. RESEARCH METHODS

1. *Formulate an understanding of the philosophy and approach to research methodology and the importance of appropriate selection and clarification of the research topic.*
2. *Investigate and develop an understanding of the critical literature review process in relation to the available sources of information and develop an understanding of the selection and application of suitable data collection and analysis strategies.*
3. *Develop knowledge and understanding of report writing, the Harvard referencing system and the production and presentation of the research project report findings.*

### Theme 2. RESTORATION INTERVENTION

4. *Select one aspect of a masonry heritage restoration intervention and critically review the available subject area literature.*
5. *Develop the research design, devise and implement a suitable data collection strategy and thereafter analyse the collected data.*
6. *Compile the fully referenced professional project report, prepare and present the report.*

## Restoration Site Management

**Unit level (MQF): 5**

**Credits: 6**

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### Unit Description

This unit is included in the Masonry Heritage Portfolio. The unit is a progression from level 4 Restoration Site management. The learner should only progress to this unit on passing level 4. This unit will enable learners to develop skills in communication working with others and information technology and construction management. The unit will give the learner the ability to manage aspects of construction project. These skills will improve the employability of the learner in the heritage market. The unit has a theory background which will give an insight to the mechanics of project and construction management. The recording of aspect could be transferable within the employment market. A site experience would allow the learner to experience the culture within the heritage industry. An introduction to the relevant professional bodies should be encouraged to allow an understanding of the standards and aims of the profession. This unit aims at providing the learner with an understanding of the level required within the Heritage industry. Vernacular and international methods procedures should be utilized to give the learner a cultural knowledge of the industry. The learner should be encouraged to participate in self-directed learning which is utilized in higher education. An Introduction to self-directed learning will enable the learner to gain a skill which could be utilized in there further learning experience.

The objectives of this unit will allow the student to be familiar with the processes and documentation required to manage a restoration site, allowing students to further develop their skills and reinforce theory in a number of key management areas.

### Learning Outcomes

**On completion of this unit the learner will be able to**

1. *Maintaining a site diary.*
2. *Procurement and control methods on a construction project.*
3. *Materials and construction adaptation for a heritage project.*
4. *Structuring and communication for site meetings.*
5. *Completion of work on site and handover.*

## Scaffolding

**Unit level (MQF): 5**

**Credits: 6**

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### Unit Description

The purpose of this unit is to impart knowledge and understanding of the types and erection of access and structural scaffolding systems used to assist in the reconstruction and refurbishment of historic structures, understand what alternative equipment is available for use to gain access to carry out the works and gain knowledge and understanding of lifting equipment available for use and the legislation governing the use of access and lifting equipment. Students will then apply this knowledge and understanding to the correct use of specified access and lifting equipment.

Learners will be assessed on the provision and use of relevant access and lifting equipment

In unison with the above information, all work will be carried out in a safe and efficient manner compliant with current industry standards and practice. In the context of the safe use of relevant equipment and resources and in the actual techniques involved within the various stages of the unit requirements.

The specific objectives for this unit, are that the learner undertakes a logical /correct sequence to this and similar tasks. And that all relevant issues, such as comprehension and correct practice have been satisfactorily addressed.

### Learning Outcomes

**On completion of this unit the learner will be able to**

- 1. Describe the erection and use of access equipment/structural scaffolding in a historic works site.*
- 2. Identify the hazards and considerations regarding existing structures, services and antiquities overlaying/underlying and surrounding historic structures.*
- 3. Identify and use alternatives to traditional scaffold systems to provide access.*
- 4. Install and use lifting equipment (hoists, lifts, pulleys).*
- 5. Understand and comply with certification processes and legislation associated with the use of structural scaffolding, access and lifting equipment.*

## Synoptic Project

**Unit level (MQF): 5**

**Credits: 12**

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### Unit Description

This unit is a progression from level 4 Synoptic project level 5 in Heritage skills. The learner should have developed skills which are the foundation of this unit. Developing theoretical and practical skills will be the main stream of learning within this unit. The skills will enhance the learner's employability and professional awareness within the masonry heritage sector. The unit should employ modern and traditional vernacular methods. The unit will relate to practice within the masonry heritage sector. A site experience will enhance the learner's experience. This unit will entail subjects as environment issues which can affect a heritage site. The communication is aimed at the learner achieving academic level presentation. The modern era allows student to provide evidence in a digital form. This is being shown in modern practice and should be encouraged but not at the disposition of traditional knowledge and methods. The learner will be exposed to different disciplines which should give the learner the guidance into which stream they can specialize. A relationship with professional bodies should be encouraged to allow a strategy of learning to be created. Peer evaluation is a tool that could be encouraged to allow a learners' perspective be gained for the delivering center.

This project undertaking will ensure that the student can consolidate much of the theoretical and practical knowledge and skills gained throughout the course, the direction / areas which the project addresses will be at the discretion of the college, but should build on subject area understanding. By considering alternative / novel methodologies or complexity in the project undertaking.

### Learning Outcomes

**On completion of this unit the learner will be able to**

1. *Develop IT skills which are utilized in the masonry heritage sector.*
2. *Analyze the project and construction management methods and practices shown in a case study.*
3. *Critique the professional issues within a case study of masonry heritage.*
4. *Work and contribute within a team on a presentation of studies.*