



*Mercurius Politicus.*

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**Qualification Information Booklet**  
**Level 3 Diploma**  
**in Monitoring Engineering**  
**Construction Activities**

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## Introduction

This booklet has been developed to provide anyone considering the MERCURIUS POLITICUS Level 3 Diploma in Monitoring Engineering Construction Activities with an introduction to the award currently available through MERCURIUS POLITICUS. This booklet contains a copy of the QCF units within the Monitoring Engineering Construction Activities qualification as well as a summary of the way in which QCF qualifications are constructed; what the process is in achieving the MERCURIUS POLITICUS qualification; and how it is assessed.

## 1. What is an MERCURIUS POLITICUS QCF qualification?

MERCURIUS POLITICUS Qualification Credit Framework qualifications (QCF) are vocational qualifications which are based on the National Occupational Standards (NOS) of that particular sector of industry. NOS are developed by employers and professional bodies in conjunction with the Standard Setting Body and describe what is meant by occupational competence within a particular job role.

All QCF qualifications are structured in such a way that they can be broken down into the following common parts:

- Units;
- Level;
- Credit value;
- Learner outcomes;
- Assessment criteria;
- Assessment requirements.

Each of these parts is further described below.

<b>Units</b>	A qualification is divided into units, each of which describes an activity which the candidate will be expected to perform competently.
<b>Level</b>	The level represents the complexity, autonomy and/or range of achievement expressed within the unit.
<b>Credit value</b>	The credit value represents the learning time being defined as the time taken by learners at the level of the unit, on average, to complete the learning outcomes of the unit to the standard determined by the assessment criteria.
<b>Learner outcomes</b>	Learner outcomes set out what a candidate is expected to know, understand or be able to do as the result of a process of learning.
<b>Assessment Criteria</b>	The assessment criteria within a unit specifies the standard a candidate is expected to meet to demonstrate that the learning outcomes have been achieved.
<b>Assessment requirements</b>	Details any requirements about the way a unit must be assessed.

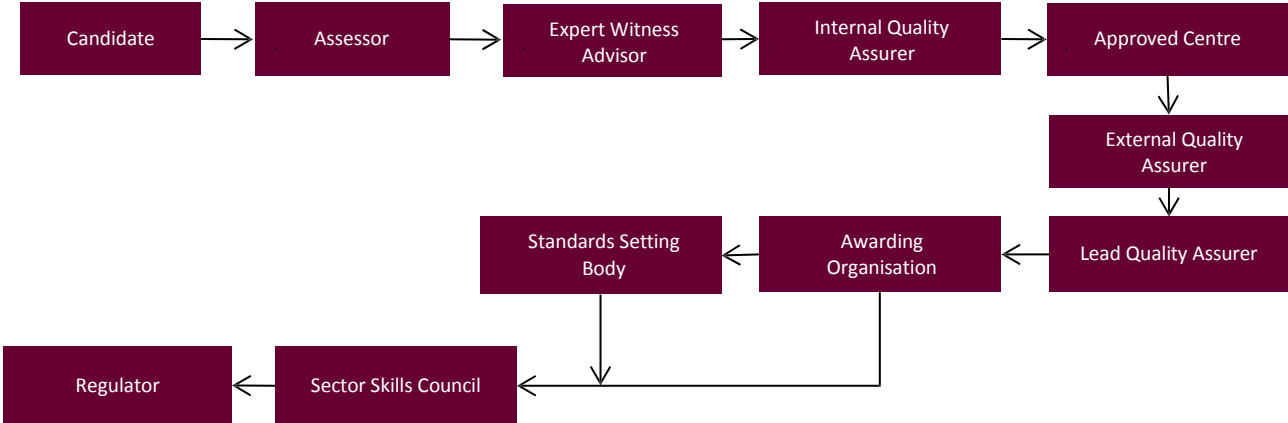
### 1.1 What is the process involved in achieving a QCF qualification?

Once a candidate has been registered with the awarding organisation, in this case MERCURIUS POLITICUS Awards and Qualifications, they will be ready to begin working towards their qualification. They will then be introduced to the assessor who will offer support and guidance as the candidate progresses through the stages of the qualification. The assessor will firstly introduce the candidate to the other key members of the qualification system. These will include:

- Internal Quality Assurer
- Expert Witness Advisor
- Approved Centre
- Centre Co-ordinator
- External Quality Assurer
- Lead Quality Assurer
- Awarding Organisation
- Standard Setting Body
- Regulator (Office of Qualifications and Examinations Regulation (Ofqual)).

The Assessor will also explain what roles each of these key members will play in assuring the quality of the qualifications system. This is vitally important as it helps to ensure that the assessment of qualifications is valid and reliable and that certificates are only awarded to those candidates who do successfully meet the standards required.

The diagram below illustrates the flow of information between each of the key members.



## LEVEL 3 DIPLOMA IN MONITORING ENGINEERING CONSTRUCTION ACTIVITIES

The following tables summarise the roles which each of the key members perform in quality assuring the regulated qualifications systems, including N/SVQs.

<b>Who's who</b>	<b>What is their role?</b>
<p><b>Candidates</b> Individuals seeking validation for their achievements and competence.</p>	<ul style="list-style-type: none"> <li>• Show they can perform to the national standards in order to be awarded credit, counting towards a Qualification and demonstrate the specified knowledge, understanding and skills.</li> <li>• Take some responsibility for the quality of evidence provided to assessors.</li> </ul>
<p><b>Assessors</b> Nominated by an approved centre and approved by an awarding organisation to assess a candidate's evidence. In direct contact with candidates. Holds appropriate qualifications as agreed by the regulators such as D32 and D33 or A1.</p>	<ul style="list-style-type: none"> <li>• Judge candidates' evidence against the national standards.</li> <li>• Advise candidates on opportunities to collect evidence.</li> <li>• Ensure that the evidence provided is current. (Up to and including the two year period prior to the portfolio completion date for any unit or qualification)</li> <li>• Decide whether the candidate has demonstrated competence, give feedback on the decision and record it.</li> <li>• Ensure that their assessment practice meets awarding organisation guidance and national standards.</li> </ul>
<p><b>Expert Witness Advisor</b> Nominated by an approved centre and approved by an awarding organisation to carry out direct observation <b>as the exception</b> when an assessor is not available.</p>	<ul style="list-style-type: none"> <li>• Can carry out direct observation of the candidate against the criteria for the mandatory assessor observation of assessment criteria and assessment requirements where the practicalities and costs of having an assessor available to observe the candidate at work prohibitive or impracticable.</li> <li>• The EWA shall meet the criteria for assessor occupational expertise as specified by the MERCURIUS POLITICUS Standards Setting Body Assessment Strategy.</li> <li>• A registered EWA can provide mandatory direct observation of any candidate in the relevant qualification for any approved centre as long as the assessor/EWA procedures</li> </ul>
<p><b>Internal Quality Assurers</b> Nominated by an approved centre and approved by an awarding organisation to ensure consistency and quality of assessment. Holds V1 and A1 or appropriate qualifications as agreed by the regulators. Works to the MERCURIUS POLITICUS IQA Code of Practice</p>	<ul style="list-style-type: none"> <li>• Work with assessors to ensure the quality and consistency of assessment.</li> <li>• Sample candidate assessments to ensure consistent assessment.</li> <li>• Ensure their own internal quality assurance meets current standards.</li> <li>• Ensure that assessment and verification records and documents are fit for purpose and meet awarding organisation requirements.</li> <li>• Ensure that requests for certificates to the awarding organisation are based on assessments of consistent quality.</li> <li>• Provide support and guidance for the centre's assessors.</li> </ul>
<p><b>Approved Centre Co-ordinators</b> Point of contact for awarding bodies. May take on some Internal Quality Assurer functions, particularly relating to administration.</p>	<ul style="list-style-type: none"> <li>• Act as a contact for the awarding organisation and the External Quality Assurer.</li> <li>• Ensure that there are accurate assessment and verification records for the qualification.</li> <li>• Request certificates and credits from the awarding organisation.</li> </ul>

<p><b>Approved Centres</b> Organisations approved by awarding bodies to assess and verify qualifications.</p>	<ul style="list-style-type: none"> <li>• Comply with regulatory requirements.</li> <li>• Manage assessment and verification on a day-to-day basis.</li> <li>• Have effective assessment practices and internal verification procedures.</li> <li>• Meet awarding organisation requirements for qualification delivery.</li> <li>• Have sufficient competent Assessors and Internal Quality Assures with enough time and authority to carry out their roles effectively.</li> </ul>
<p><b>Lead Quality Assurer</b> Appointed by the MERCURIUS POLITICUS awarding organisation to manage teams of External Quality Assurers (EQA)</p>	<ul style="list-style-type: none"> <li>• Manage the workload and monitor performance of the External Quality Assurers.</li> <li>• Provide advice and guidance to External Quality Assurers.</li> <li>• Carry out all new centre approvals.</li> <li>• Approve post approval monitoring reports and ensure all actions are implemented.</li> <li>• Approve any recommendations for sanctions on centres.</li> <li>• Resolve disputes.</li> <li>• Approve recommendations for appointment of new assessors and Internal Quality Assurers.</li> </ul>
<p><b>External Quality Assurers</b> Appointed by the MERCURIUS POLITICUS awarding organisation to monitor the work of approved centres. Act as key link between the awarding organisation and approved centres. Hold V2 and A1 or appropriate qualification as agreed with the regulators. Work to the MERCURIUS POLITICUS Code of Practice.</p>	<ul style="list-style-type: none"> <li>• Make sure that decisions on competence are consistent across centres.</li> <li>• Make sure that the quality of assessment and verification meets national standards.</li> <li>• Sample candidate assessments and monitor assessment and verification practices in centres, including interviews with assessors and Internal Quality Assurers and candidates.</li> <li>• Provide advice, guidance and feedback to centres.</li> <li>• Make regular visits to centres and assessment locations.</li> <li>• Ensure that their own verification practice meets V2 and A1 or appropriate qualification as agreed with the regulators.</li> </ul>
<p><b>Awarding Organisations</b> An organisation approved by the regulators to award qualifications.</p>	<ul style="list-style-type: none"> <li>• Ensure the quality and consistency of assessment for qualifications nationally.</li> <li>• Produce guidance for centres.</li> <li>• Appoint, support and develop External Quality Assurers, allocate them to centres and monitor their work.</li> <li>• Approve and monitor centres against the approved centre criteria.</li> <li>• Award credit.</li> <li>• Collect information from centres to inform national decisions about qualification delivery.</li> <li>• Provide information to the regulators.</li> </ul>
<p><b>Standards Setting Bodies (SSB)</b> Develop the national occupational standards on which qualifications are based.</p>	<ul style="list-style-type: none"> <li>• Work with industry to develop National Occupational Standards.</li> <li>• Work with awarding bodies to produce assessment strategies.</li> <li>• Provide information about, and clarification of, the National Occupational Standards.</li> </ul>
<p><b>Sector Skills Councils (SSC)</b></p>	<ul style="list-style-type: none"> <li>• Accredite qualifications put forward by awarding organisations if they meet the published criteria.</li> </ul>

**Ofqual**

Ofqual is the regulator of qualifications, test and examinations in England, Wales and Northern Ireland.

- Ensure that organisations that offer and deliver qualifications (awarding organisations) have good systems in place, and that they are held to account for their performance.
- Ensure that all qualifications offered by awarding organisations are fair and are comparable with other qualifications.
- Ensure that standards in qualifications, exams and tests are monitored and the findings are reported.
- Ensure that there is fair access to qualifications for all candidates.
- Ensure the quality of marking of exams, tests and other assessments is high, so that learners get the results they deserve.
- Ensure that the qualifications market provides value for money and meets the needs of learners and employers.
- Ensure that debate about important topics, such as standards of exams and qualifications, is encouraged.

## 1.2 What will be assessed?

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Once the candidate has decided with the assessor which route they will take through the qualification, i.e. the units they will work towards, they are ready to begin assessment. Broadly speaking two aspects of the candidate's working practice will be assessed: their performance; and their knowledge and understanding. The assessor will work with the candidate to plan how, when and where evidence will be gathered to cover these aspects.

## 1.3 How will assessment take place?

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There are a variety of methods through which evidence of the candidate's competence and understanding can be gathered. There are also different methods by which to collect performance and knowledge evidence.;

- Direct observation of the candidate's performance by the assessor and/or EWA.
- Testimony from a witness such as a candidate's colleague, this is also observation of the candidate.
- Documentary evidence (*such as permits to work, work specifications etc.*) which relate to work successfully completed by the candidate on a past occasion.
- Demonstration of a task by the candidate at the assessor's request. This is known as 'Simulation'.
- Questioning of the candidate to establish knowledge and understanding requirements.

These options give an assessor and the candidate some flexibility in how they are able to prove competence. However, some of these assessment methods are less reliable and as such their use may be limited within the qualification. If this is the case the guidance contained within the QCF units will provide further clarification. Direct observation of the candidate by the assessor is the most reliable, and often the most straightforward, method of gathering evidence. The approved centre and the assessment team responsible for assessing the candidate will determine whether observation or some of the other assessment methods listed above offer the best assessment solution for each individual candidate.

In relation to evidence of knowledge and understanding there are two main assessment methods:

1. Performance evidence gathered in the course of working towards the unit.
2. Questioning of the candidate.

In some instances, it will be self-evident from the candidate's performance that they have acquired the necessary knowledge and understanding e.g. where the unit requires knowledge of how to carry out a specific task and by carrying it out effectively the candidate demonstrates that they know what to do.

However, knowledge of why something is done in a certain way cannot be demonstrated through performance alone and questioning of the candidate is another assessment method that could be used.



## 1.4 Simulation requirements

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Demonstration, as previously outlined, is one of the assessment methods available to candidates and assessors through which to observe a candidate's competence. However, its use has been limited to certain specific units in which it may be possible to gather the naturally occurring workplace evidence normally required.

Reference needs to be made to the standards to confirm the status of each unit, however, as a rule simulation is only permissible where one or more of the following characteristics apply:

- a) Health and safety could be compromised by seeking workplace evidence.
- b) The behaviour or situation under which assessment occurs happens infrequently in the workplace.
- c) The responsibility for the work rests with the candidate, but it is typically either delegated or carried out jointly with another and the candidate has limited opportunity to demonstrate it directly and individually.
- d) There would be unacceptable commercial or operational risk in securing workplace assessment.
- e) Facilities would need to be placed in an unacceptable operating state to allow for assessment to take place.

The assessment requirements detail within each unit whether or not simulation is permitted within the assessment for that unit.

Where simulation is permitted, the simulated activity must be designed to reflect the activity as it would be carried out in a typical workplace environment, including:

- a) The presence, actions and capabilities of other interacting personnel.
- b) The urgency with which the activity must be carried out and the time needed to complete it.
- c) The number and sequence of actions needed to complete the activity.
- d) The number and complexity of the factors affecting the activity.
- e) The skills and knowledge needed to carry out the activity.
- f) The nature and availability of resources needed to carry out the activity.
- g) Access to references and sources of advice and assistance that could be needed if problems arise.
- h) The type of documentation to be completed.
- i) The standards to which the activity must be carried out, including any practices and procedures which must be followed.
- j) The outcomes which the activity will produce.
- k) Access to normal/usual workplace instructions.

## 1.5 Assessment of candidates with particular assessment requirements

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### **Equal Opportunities, Reasonable Adjustments and Special Considerations.**

#### **Access to Fair Assessment**

MERCURIUS POLITICUS Awards & Qualifications requires approved centres to demonstrate a clear commitment to access to fair assessment, equal opportunities, reasonable adjustments and special considerations and to operate a Fair Assessment Policy in all matters concerning the assessment of candidates for the award of Qualifications and/or certificates or unit credits and in any appeals against approved centre decisions.

The policy must take account of full current legislation in the area of access to fair assessment and equal opportunities.

The approved centre must ensure that relevant staff in the assessment team receives training in the relevant sections of current legislation and that sufficient and appropriate information with regard to the content of this procedure is passed to all members of the approved centre assessment team.

The approved centre must maintain records of assessment and verification decisions, which demonstrate that:

- Assessment decisions only discriminate between candidates on the basis of the competence defined by the National Occupational Standards specified in the qualification.
- Assessment judgements are made regardless of race, gender, disability, nationality, religion, age, sexual orientation, family status or any other irrelevant factor.

### **Arrangements for candidates with particular assessment requirements**

#### **Principles**

Approved centres must ensure that there are no unnecessary barriers to assessment, which prevent candidates from effectively demonstrating their attainment. Arrangements for candidates with particular assessment requirements (special arrangements) must also ensure that such candidates are not given, or do not appear to be given, an unfair advantage. Special arrangements are generally not appropriate where the candidate's particular difficulty directly affects performance in the actual attributes that are the focus of assessment.

Approved centres must make special arrangements according to the needs of the individual candidate, reflecting the candidate's usual method of working, the assessment requirements as set out in the specification and any guidelines set down by the regulatory authorities. Any special arrangements must ensure that the validity, reliability and integrity of the assessment are preserved and that certificates accurately reflect candidate attainment.

Approved centres are only required to do what is 'reasonable' in terms of giving access. What is reasonable will depend on the individual circumstances, cost implications and the practicality and effectiveness of the adjustment. As stated above the NOS must be taken into consideration, as must any safety and health implications.

There are two ways in which access to fair assessment can be maintained

1. Through reasonable adjustments.
2. Through special consideration.

#### **Reasonable Adjustments**

A reasonable adjustment is any action that helps to reduce the effect of a disability that places the candidate at a substantial disadvantage in the assessment situation.

Reasonable adjustments must not affect the integrity of what needs to be assessed, but may involve:

- Changing standard assessment arrangements, for example allowing candidates extra time to complete the assessment activity.
- Adapting assessment materials, such as providing materials in Braille.
- Providing access facilitators during assessment, such as a sign language interpreter or a reader.
- Re-organising the assessment room, such as removing visual stimuli for an autistic candidate.

Reasonable adjustments will not be taken into consideration during the assessment of the candidates work.

### Special Consideration

Special consideration is given following an assessment to candidates who are present for the assessment but may have been disadvantaged by temporary illness, injury or adverse circumstances, which arose at or near the time of assessment.

Special consideration should not give the candidate an unfair advantage neither should its use cause the user of the certificate to be misled regarding a candidate's achievements. The candidate's result must reflect his or her achievement in the assessment and not necessarily his or her potential ability.

**Where an assessment requires a competence, criteria or standard to be met fully, it may not be possible to apply special consideration. In some circumstances it may be more appropriate to offer the candidate an opportunity to retake the assessment at a later date or to extend the registration period so that the candidate has more time to complete the assessment activity.**

Approved centres must make provision for special consideration to ensure that candidates who suffer temporary illness, injury or indisposition at the time of assessment are treated fairly. Such assessment should be made available to the candidate as soon as is reasonably practical within the guidelines of access to fair assessment. Where this is not possible, the awarding organisation will consider each individual case for special consideration, identifying the minimum requirements for an award to be made.

### Procedures

Approved centre assessment team members should refer to the written procedures provided within the MERCURIUS POLITICUS Awards & Qualifications Quality Assurance Procedures Manual for further guidance and information or to their own Approved Centre Operations Manual.

### Monitoring and Reporting

The awarding organisation will monitor, evaluate and report annually on the use of special arrangements by its approved centres. Relevant data will be shared with the regulatory authorities on request.

## 1.6 Recommended prior learning

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There is no prior knowledge, attainment or experience required for this qualification. Existing workers are expected to be competent by virtue of their length of service and experience and satisfactory performance in their roles, and will need to achieve the qualification in order to have this competence validated.

## 1.7 Credit

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Credit is awarded to candidates for the successful achievement of the learning outcomes of a unit. The number of credits awarded will be the same as the value of the achieved unit. It is not possible for some credit to be achieved for partial completion of a unit or for candidates be awarded credit when all learning outcomes are not achieved by virtue of any 'compensation' for stronger performance in other areas of learning/achievement.

**Credit accumulation** is the term used to describe the process of putting a combination of credits to meet the achievement requirements of a qualification. The rules of combination for a qualification determine the requirements for achievement of credits through particular units. Awarding Organisations award qualifications based on this process.

**Credit transfer** describes the process of using a credit or credits awarded in the context of a different qualification or awarded by a different awarding organisation towards the achievement requirements of another qualification. Credits can only be transferred between qualifications and awarding organisations subject to the rules of combination for the receiving qualification.

## 1.8 Rules of Combination

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Rules of combination specify the credits that need to be achieved through completion of particular units for a qualification to be awarded. All accredited qualifications within the QCF must have a set of rules of combination. Rules of combination set out the credit value of the qualification, credits from mandatory units and credits from optional units, credits from equivalent units and exemptions along with time limits on the process of credit accumulation or exemptions.

**Exemptions** are detailed within the rules of combination, exemptions set out any exemption from the requirement to achieve credit for units that candidates can claim, based on certificated achievement outside the QCF deemed to be of equivalent value to a QCF unit or units.

Time limits on the process of credit accumulation or exemptions are set out for each QCF unit within the rules of combination. MERCURIUS POLITICUS QCF units have a time limit of 24 months from achievement for use within a QCF qualification.

## 1.9 Career development within the engineering construction industry

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The MERCURIUS POLITICUS's Apprenticeship programme is its main vehicle for recruiting and training young people to meet the future skills requirements of the industry. Qualifications at Levels 2 and 3 are often an integral part of this scheme.

The MERCURIUS POLITICUS provides an alternative training route towards qualifications for those who have not completed an apprenticeship but seek to have their competence validated. Information on this scheme is available on request from MERCURIUS POLITICUS offices.

For more information about career progression you can go to the MERCURIUS POLITICUS website.

## 2. Qualification Structure

### 2.1 Level 3 Diploma in Monitoring Engineering Construction Activities

To achieve this qualification, candidates must attain a minimum of 100 credits made up of:

- all EIGHT of the Mandatory Units (89 credits)  
plus
- a minimum of ONE unit from the Optional Units (minimum 11 credits)

#### MANDATORY UNITS – candidates must achieve all EIGHT units to a total of 89 credits

Ref. Number	Unit Title	Level	Credit
CO - UA1	Contribute to Effective Working Relationships in Engineering Construction	2	3
CO - UA2	Work Safely and Minimise Risk in Engineering Construction	2	4
CO - UA3	Identify and Deal with Hazards and Emergencies in the Engineering Construction Work Environment	3	6
MECA - UA1	Input to the Construction Execution Plan and Construction Sequence	3	9
MECA - UA2	Apply the principles of construction during the design stage	3	11
MECA - UA3	Control and monitor Construction Activities within the Scope and Definition of the Contract	3	24
MECA - UA4	Demonstrate and Promote a Quality, Health, Safety and Environmental Culture and Uphold its Values	3	16
MECA - UA6	Perform construction completion activities	3	16

#### OPTIONAL UNITS – candidates must achieve a minimum of ONE units to attain at least 11 credits.

Ref. Number	Unit Title	Level	Credit
MECA – UA5	Develop and Maintain Industrial Relations	3	11
MECA – UA7	Perform commissioning activities	4	15
MECA – UA8	Contribute to project quality close-out activities	3	16

## 2.2 Unit summaries

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### Mandatory Units

#### **CO – UA1: Contribute to Effective Working Relationships in Engineering Construction**

This unit has been designed to assess candidates in being able to establish and maintain productive working relationships, deal with disagreements in an amicable and constructive way so that good relationships are maintained. Keep others informed about work plans or activities which affect them and seek assistance from others in a polite and courteous way without causing undue disruption to normal work activities. Respond in a timely and positive way when others ask for help or information.

#### **CO – UA2: Work Safely and Minimise Risk in Engineering Construction**

This unit has been designed to assess learner competence in being able to:

- Work safely at all times, complying with health and safety and other relevant regulations and guidelines
- Call for expert help in the event of contingencies occurring, using warning systems as appropriate
- Take prompt and appropriate action to minimise risk of personal and third party injury as a first priority and then damage to property and equipment
- Follow shutdown and evacuation procedures promptly and correctly
- Deal safely with dangers that can be contained using appropriate equipment and materials, in accordance with organisational policy and procedures

#### **CO – UA3: Identify and Deal with Hazards and Emergencies in the Engineering Construction Work Environment**

This unit has been designed to assess learner competence in being able to:

- Work safely at all times, complying with health and safety and other relevant regulations and guidelines
- Recognise industrial processes, tools, equipment and materials that have the potential to cause harm
- Check for hazards in the workplace in line with agreed and approved procedures
- Identify any potential hazards and take appropriate action to minimise the risk from them
- Report any hazards identified and any actions taken

#### **MECA – UA1: Input to the Construction Execution Plan and Construction Sequence**

This unit has been designed to assess learner competence in being able to interpret the construction sequence and the construction execution plan, establish project resources, identify local factors that may affect construction and input to the site waste management plan whilst adhering to Health and Safety legislation, regulations and safe working practices.

#### **MECA – UA2: Apply the principles of construction during the design stage**

This unit has been designed to assess learner competence in being able to interpret and check that drawings and specifications meet construction principles, raising any discrepancies and recommending corrective actions in accordance with procedures. You will also input to the logistics plan and adhere to relevant construction design and management regulations whilst adhering to Health and Safety legislation, regulations and safe working practices..

#### **MECA – UA3: Control and monitor Construction Activities within the Scope and Definition of the Contract**

This unit has been designed to assess learner competence in being able to ensure activities are completed in accordance with the contract, the construction execution plan and relevant procedures. You will be able to interpret engineering drawings and specifications in order to monitor stakeholders' performance and compliance with relevant schedules and plans whilst adhering to Health and Safety legislation, regulations and safe working practices.

#### **MECA – UA4: Demonstrate and Promote a Quality, Health, Safety and Environmental Culture and Uphold its Values**

This unit has been designed to assess learner competence in being able to participate in the development and implementation of the site Quality, Health, Safety and Environmental plans, display safety leadership values, encourage and demonstrate a Health and Safety ethos and promote organisational values whilst adhering to Health and Safety legislation, regulations and safe working practices.

**MECA – UA6: Perform construction completion activities**

This unit has been designed to assess learner competence in being able to carry out inspection, testing, reporting, quality checking and mechanical completion activities whilst adhering to Health and Safety legislation, regulations and safe working practices.

**Optional Units**

**MECA – UA5: Develop and Maintain Industrial Relations**

This unit has been designed to assess learner competence in being able to comply with relevant local and national industrial relations agreements, demonstrate an awareness of industrial relations issues and anticipate and communicate any potential issues and problems whilst adhering to Health and safety legislation, regulations and safe working practices.

**MECA – UA7: Perform commissioning activities**

This unit has been designed to assess learner competence in being able to carry out plant start-up monitoring activities and operational checks, carry out operator training activities and performance testing whilst adhering to Health and safety legislation, regulations and safe working practices.

**MECA – UA8: Contribute to project quality close-out activities**

This unit has been designed to assess learner competence in being able to interpret and implement document control procedures with respect to as-built drawings, input to and handover documentation in accordance with contractual requirements and participate in lessons learned activities whilst adhering to Health and Safety legislation, regulations and safe working practices.

### 3. Level 3 Diploma in Monitoring Engineering Construction Activities

#### CO – UA1: Contribute to Effective Working Relationships in Engineering Construction

Title	Contribute to Effective Working Relationships in Engineering Construction
Level	2
Credit value	3
Learning outcomes	Assessment criteria
The learner will:	The learner can:
1. Establish and maintain productive working relationships	1.1 Develop working relationships with different people in the work environment such as: those for whom they are responsible, those to whom they are responsible, clients, colleagues, other tradespersons, suppliers, security/safety personnel
2. Deal with disagreements in an amicable and constructive way so that effective relationships are maintained	2.1 Accept the opinions of others in relation to work activities 2.2 Review different points of view on work related matters in a positive and constructive way in order to maintain working relationships and productivity 2.3 Apply mediation (in accordance with the individual's responsibilities) in the event of disagreements between third parties in order to maintain productive working relationships
3. Keep others informed about work plans or activities which affect them	3.1 Use appropriate types of communication (formal/informal, written, verbal) to clearly relay important information to others
4. Seek assistance from others in a polite and courteous way without causing undue disruption to normal working activities	4.1 Approach workplace colleagues / associates in an appropriate manner and at an appropriate time, in order to seek assistance on work related issues
5. Respond in a timely and positive way when others ask for help or information	5.1 Prioritise requests for help and information in relation to wider work activities 5.2 Clarify requests for help and information to identify exactly what is required 5.3 Ensure appropriate responses are provided within agreed timescales
6. Understand the importance of creating and maintaining working relationships	6.1 Describe the individual's responsibilities for creating and maintaining working relationships and explain why it is important to do so
7. Understand problems affecting relationships	7.1 Describe different problems that can affect relationships, and the actions that can be taken to deal with specific difficulties
8. Understand lines of communication and responsibilities	8.1 Explain the individual's responsibilities and the responsibilities of others within the work location 8.2 Describe the lines of communication that exist within the individual's working environment and explain the agreed procedure for passing information



Additional information about this unit	
Unit purpose and aim(s)	This unit has been designed to assess learner competence in being able to: <ul style="list-style-type: none"> <li>• Establish and maintain productive working relationships</li> <li>• Deal with disagreements in an amicable and constructive way so that good relationships are maintained</li> <li>• Keep others informed about work plans or activities which affect them</li> <li>• Seek assistance from others in a polite and courteous way without causing undue disruption to normal work activities</li> <li>• Respond in a timely and positive way when others ask for help or information</li> </ul>
Unit expiry date	30/06/2019
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from MERCURIUS POLITICUS/ECRS 11.04 (CO 1)
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from work-based activities on suitable engineering construction industry sites. Such methods may include discussions with candidates, the use of witness testimony and the interview of witnesses as part of the assessment process.</p> <p>Competence at level 3 has to be demonstrated with:</p> <ol style="list-style-type: none"> <li>1. Groups of people with which relationships should be maintained</li> <li>2. Methods of Communications</li> </ol> <p>The requirements found in the latest version of "MERCURIUS POLITICUS Assessment Strategy for Craft, Technician and Technical Vocational Qualifications" must be followed.</p> <p>Further guidance on this MERCURIUS POLITICUS unit can be found in the Assessor</p>
Support for the unit from a SSC or other appropriate body (if required)	MERCURIUS POLITICUS
Location of the unit within the subject/sector classification system	<p><b>Second-tier sector/subject area</b></p> <p>4.1 Engineering</p> <p><b>Sector/subject areas</b></p> <p>4. Engineering and manufacturing technologies</p> <p>5. Construction, planning and the built environment</p>
Name of the organisation submitting the unit	MERCURIUS POLITICUS
Availability for use	Shared
Unit available from	01/08/2010
Unit guided learning hours	15

**CO – UA2: Work Safely and Minimise Risk in Engineering Construction**

Title	Work Safely and Minimise Risk in Engineering Construction
Level	2
Credit value	4
Learning outcomes	Assessment criteria
The learner will: 1. Understand health and safety legislation, regulations and safe working practices and procedures	The learner can: 1.1 Explain the requirements of health and safety legislation 1.2 Explain the consequences for employers and employees of not fulfilling their legal health and safety responsibilities 1.3 Explain the purpose and nature of risk assessments, method statements, and permit to work systems, and the relevance of local procedures and guidance notes 1.4 Describe reporting lines and procedures
2. Understanding personal site safety responsibilities	2.1 Describe how to recognise health and safety training needs, the procedure for requesting training and who to ask for help in understanding the work instructions 2.2 Describe how to get information relating to the safe use of equipment and how to ensure the equipment is used safely 2.3 Describe how to recognise when personal protective equipment should be used and how to select and use the correct equipment for the work to be undertaken 2.4 Describe different types of vibration injuries and explain how they can be prevented 2.5 Explain the importance of personal behaviour in maintaining workplace standards 2.6 Describe the checks which are needed to make sure that portable electrical appliances are safe to use 2.7 Describe what a safe system for electrical isolation should include and why low voltage is generally safer in relation to health and safety 2.8 Describe the risks from overhead cables and how to control them 2.9 Describe what must be done when carrying hazardous substances in vehicles 2.10 Describe where asbestos is likely to be found, what should be done if it is thought to have been found and how it is a risk to health
3. Understand others site safety responsibility	3.1 Explain who is responsible for ensuring that equipment is checked and safe to use 3.2 Describe who is responsible and who must assess the health and safety of people working on a client's site 3.3 Describe the legal rights and responsibilities of the appointed safety representatives and the powers of the regulatory inspectors
4. Know first aid procedures	4.1 Describe the first aid procedures that typically apply in the workplace 4.2 Describe the aspects of first aid in the workplace that all personnel are expected to know
5. Understand evacuation procedures	5.1 Describe how to work safely in an excavation 5.2 Explain procedures for shutdown and evacuation and state where procedures can be obtained
6. Understand contingency reporting documentation and systems	6.1 Describe the contingency reporting documentation and systems that are relevant to workplace activities
7. Understand appropriate reporting lines and procedures	7.1 Explain how to comply with the various reporting lines and procedures that apply in the working environment

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit has been designed to assess learner competence in being able to:</p> <ul style="list-style-type: none"> <li>• Work safely at all times, complying with health and safety and other relevant regulations and guidelines</li> <li>• Call for expert help in the event of contingencies occurring, using warning systems as appropriate</li> <li>• Take prompt and appropriate action to minimise risk of personal and third party injury as a first priority and then damage to property and equipment</li> <li>• Follow shutdown and evacuation procedures promptly and correctly</li> <li>• Deal safely with dangers that can be contained using appropriate equipment and materials, in accordance with organisational policy and procedures</li> </ul> <p>In the context of this unit, responsibility is limited to working within an overall risk control strategy which has been developed by safety specialists and which includes detailed criteria for identifying risks together with clearly defined procedures for action which must be followed. In some cases, you may be expected to refer to others for final authorisations, even though you remain responsible for identifying and implementing decisions.</p>
Unit expiry date	30/06/2019
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from MERCURIUS POLITICUS/ECRS 10.06 (CO 2), MERCURIUS POLITICUS (CO 4).
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from discussions with candidates about work-based activities on suitable engineering construction industry sites. Such methods may include discussions about product evidence and questioning.</p> <p>Competence at level 3 has to be demonstrated with:</p> <ol style="list-style-type: none"> <li>1. Level and extent of responsibility.</li> <li>2. Types of contingencies.</li> <li>3. Actions to be taken.</li> </ol> <p>The requirements found in the latest version of "MERCURIUS POLITICUS Assessment Strategy for Craft, Technician and Technical Vocational Qualifications" must be followed.</p> <p>Further guidance on this MERCURIUS POLITICUS unit can be found in the</p>
Support for the unit from a SSC or other appropriate body (if required)	MERCURIUS POLITICUS
Location of the unit within the subject/sector classification system	<p><b>Second-tier sector/subject area</b></p> <p>4.1 Engineering</p> <p><b>Sector/subject areas</b></p> <p>4. Engineering and manufacturing technologies</p> <p>5. Construction, planning and the built environment</p>
Name of the organisation submitting the unit	MERCURIUS POLITICUS
Availability for use	Shared
Unit available from	01/08/2010
Unit guided learning hours	20

**CO – UA3: Identify and Deal with Hazards and Emergencies in the Engineering Construction Work Environment**

Title	Identify and Deal with Hazards and Emergencies in the Engineering Construction Work Environment
Level	3
Credit value	6
Learning outcomes	Assessment criteria
The learner will:	The learner can:
1. Recognise industrial processes, tools, equipment and materials that have the potential to cause harm	1.1 Identify different hazardous processes, tools, equipment and materials which exist in the work environment 1.2 Identify hazardous industrial processes associated with particular working environments
2. Check for and identify potential hazards in the workplace in line with agreed and approved procedures	2.1 Safely check for potential hazards in accordance with agreed and approved procedures 2.2 Identify potential hazards in the workplace and report in accordance with approved procedures 2.3 Minimise potential hazards using the criteria and procedures specified in the risk control strategy
3. Take appropriate action to minimise the risk from hazards and emergencies	3.1 Take appropriate action upon identification of a hazard or emergency 3.2 Call for expert help using warning systems as appropriate 3.3 Follow shut down and evacuation procedures promptly and correctly 3.4 Deal safely with hazards and emergencies in accordance with organisational policy and procedures 3.5 Report in accordance with the overall risk control strategy
4. Understand health and safety legislation, regulations and safe working practices and procedures	4.1 Explain the requirements of health and safety legislation 4.2 Explain the purpose and nature of risk assessments, method statements, and permit to work systems, and the relevance of local procedures and guidance notes 4.3 Describe reporting lines and procedures
5. Understand hazard spotting and safety assessment methods and techniques	5.1 State where information on hazard spotting and safety assessment methods and techniques can be found 5.2 Describe the hazard spotting and safety assessment methods and techniques, which apply in the work location.
6. Understand types of hazards involving processes, tools, equipment and materials	6.1 Describe common types of hazard associated with processes, tools, equipment and materials 6.2 State what the individuals' responsibilities are in terms of dealing with and notifying others of hazards
7. Understand effects of hazards on persons, property and the environment	7.1 Describe the effects of hazards on persons, property and the environment
8. Understand actions to minimise risk from hazards	8.1 Describe the types of actions required to deal with and minimise the risks from different hazards

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit has been designed to assess learner competence in being able to:</p> <ul style="list-style-type: none"> <li>• Work safely at all times, complying with health and safety and other relevant regulations and guidelines</li> <li>• Recognise industrial processes, tools, equipment and materials that have the potential to cause harm</li> <li>• Check for hazards in the workplace in line with agreed and approved procedures</li> <li>• Identify any potential hazards and take appropriate action to minimise the risk from them</li> <li>• Report any hazards identified and any actions taken</li> </ul> <p>In the context of this unit, responsibility is limited to working within an overall risk control strategy which has been developed by safety specialists and which includes detailed criteria for identifying risks together with clearly defined procedures for action which must be followed. In some cases, you may be expected to refer to others for final authorisations, even though you remain responsible for identifying and implementing decisions.</p>
Unit expiry date	30/06/2019
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from MERCURIUS POLITICUS/ECRS 10.04 (CO 3).
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from work-based activities on suitable engineering construction industry sites by discussions with candidates. Such methods may include discussions about product evidence and questioning.</p> <p>Competence at level 3 has to be demonstrated with:</p> <ol style="list-style-type: none"> <li>1. Level and extent of responsibility.</li> <li>2. Type of hazards and risks arising.</li> <li>3. Hazard checking methods to be used.</li> <li>4. The type of workplace and environment</li> <li>5. Type of action to be taken.</li> </ol> <p>The requirements found in the latest version of "MERCURIUS POLITICUS Assessment Strategy for Craft, Technician and Technical Vocational Qualifications" must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	MERCURIUS POLITICUS
Location of the unit within the subject/sector classification system	<p><b>Second-tier sector/subject area</b></p> <p>4.1 Engineering</p> <p><b>Sector/subject areas</b></p> <p>4. Engineering and manufacturing technologies</p> <p>5. Construction, planning and the built environment</p>
Name of the organisation submitting the unit.	MERCURIUS POLITICUS
Availability for use	Shared
Unit available from	01/08/2010
Unit guided learning hours	30

**MECA – UA1: Input to the Construction Execution Plan and Construction Sequence**

Title	Input to the Construction Execution Plan and Construction Sequence
Level	3
Credit value	9
Learning outcomes	Assessment criteria
The learner will: 1. Ensure all work on site is carried out safely and risk is minimised at all times	The learner can: 1.1 Refer safety related matters to appropriate persons as required
2. Input to the construction execution plan and construction sequence	2.1 Input to the construction execution plan and construction sequence 2.2 Interpret the construction sequence in order to identify construction principles, risks and activity schedule 2.3 Interpret the requirements of the construction execution plan 2.4 Deal promptly and effectively with problems and report those that cannot be solved
3. Understand input to and interpretation of the construction plan and construction sequence	3.1 Explain how the construction execution plan, construction sequence and related documents dictate how the work will progress 3.2 Explain the principles of construction and explain their importance in planning and design 3.3 Describe local factors and risks that may influence construction progress and explain the consequences of not taking them into account during the planning stage 3.4 Describe reporting lines and procedures

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit has been designed to assess learner competence in being able to interpret the construction sequence and the construction execution plan, establish project resources, identify local factors that may affect construction and input to the site waste management plan whilst adhering to Health and Safety legislation, regulations and safe working practices.</p> <p>In the context of this unit, responsibility is limited to interpreting and working within given specifications, selecting techniques and making variations to achieve the best possible result. In some cases, you may still be expected to refer to others for final authorisation, even though you remain responsible for identifying and implementing decisions.</p>
Unit expiry date	30/06/2019
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from ECIMECA01
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from work-based activities on suitable engineering construction industry sites.</p> <p>Competence at level 3 has to be demonstrated with:</p> <ol style="list-style-type: none"> <li>1. Level and extent of responsibility</li> <li>2. Information to be extracted</li> <li>3. Construction principles</li> <li>4. Local factors</li> <li>5. Consideration of Health, Safety, Environmental and Cost factors</li> </ol> <p>The requirements found in the latest version of "MERCURIUS POLITICUS Assessment Strategy for Craft, Technician and Technical Vocational Qualifications" must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	MERCURIUS POLITICUS
Location of the unit within the subject/sector classification system	<p><b>Second-tier sector/subject area</b></p> <p>4.1 Engineering</p> <p><b>Sector/subject areas</b></p> <ol style="list-style-type: none"> <li>4. Engineering and manufacturing technologies</li> <li>5. Construction, planning and the built environment</li> </ol>
Name of the organisation submitting the unit	MERCURIUS POLITICUS
Availability for use	Shared
Unit available from	01/07/2014
Unit guided learning hours	60

**MECA – UA2: Apply the principles of construction during the design stage**

Title	Apply the principles of construction during the design stage
Level	3
Credit value	11
Learning outcomes	Assessment criteria
<p>The learner will:</p> <p>1. Apply construction principles during the design stage</p>	<p>The learner can:</p> <p>1.1 Interpret construction principles as detailed in the construction plan</p> <p>1.2 Interpret engineering drawings and specifications in order to understand the design intent</p> <p>1.3 Check drawings and specifications meet construction requirements as referenced in the construction plan and construction schedule</p> <p>1.4 Adhere to relevant construction design and management regulations</p> <p>1.5 Comply with agreed change management procedures</p> <p>1.6 Interpret change requests with respect to potential commercial implications</p> <p>1.7 Deal promptly and effectively with problems and report those that cannot be solved</p>
<p>2. Understand construction principles relevant to the design stage</p>	<p>2.1 Summarise the principles of construction</p> <p>2.2 Explain how to interpret different types of engineering drawings and specifications and describe the consequences of incorrect interpretation</p> <p>2.3 Explain the procedures to verify the correct revisions of drawings and specifications are being used</p> <p>2.4 Summarise relevant construction design and management regulations</p> <p>2.5 Explain change management procedures</p> <p>2.6 Describe reporting lines and procedures</p>



Additional information about this unit	
Unit purpose and aim(s)	<p>This unit has been designed to assess learner competence in being able to interpret and check that drawings and specifications meet construction principles, raising any discrepancies and recommending corrective actions in accordance with procedures. You will also input to the logistics plan and adhere to relevant construction design and management regulations whilst adhering to Health and Safety legislation, regulations and safe working practices.</p> <p>In the context of this unit, responsibility is limited to interpreting and working within given specifications, selecting techniques and making variations to achieve the best possible result. In some cases, you may still be expected to refer to others for final authorisation, even though you remain responsible for identifying and implementing decisions.</p>
Unit expiry date	30/06/2019
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate).	Derived from ECIMECA02
Assessment requirements or guidance specified by a sector regulatory body (if appropriate).	<p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from work-based activities on suitable engineering construction industry sites.</p> <p>Competence at level 3 has to be demonstrated with:</p> <ol style="list-style-type: none"> <li>1. Health, Safety and Environmental factors</li> <li>2. Level and extent of responsibility</li> <li>3. Information to be extracted</li> <li>4. Construction principles</li> <li>5. Change management procedures</li> <li>6. Technical, legal and financial implications</li> </ol> <p>The requirements found in the latest version of "MERCURIUS POLITICUS Assessment Strategy for Craft, Technician and Technical Vocational Qualifications" must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required).	MERCURIUS POLITICUS
Location of the unit within the subject/sector classification system	<p><b>Second-tier sector/subject area</b></p> <p>4.1 Engineering</p> <p><b>Sector/subject areas</b></p> <p>4. Engineering and manufacturing technologies</p> <p>5. Construction, planning and the built environment</p>
Name of the organisation submitting the unit	MERCURIUS POLITICUS
Availability for use	Shared
Unit available from	01/07/2014
Unit guided learning hours	40

**MECA – UA3: Control and monitor Engineering Construction Activities within the Scope and Definition of the Contract**

Title	Control and monitor Engineering Construction Activities within the Scope and Definition of the Contract
Level	3
Credit value	24
Learning outcomes	Assessment criteria
The learner will: 1. Ensure all work on site is carried out safely and risk is minimised at all times	The learner can: 1.1 Refer safety related matters to appropriate persons as required 1.2 Identify a range of hazards 1.3 Take appropriate action to minimise the risk from hazards 1.4 Ensure work is completed in accordance with relevant sections of the Health and Safety at Work Act and its associated regulations 1.5 Ensure work is completed in accordance with the requirements of risk assessments and permit to work systems
2. Control and monitor engineering construction activities within the scope and definition of the contract	2.1 Interpret the construction execution plan in order to ensure activities are executed in accordance with it 2.2 Interpret contractual terms in order to ensure activities are executed in accordance with the scope and definition of the contract 2.3 Interpret different forms of contract and working arrangements 2.4 Carry out monitoring of engineering construction activities in accordance with project requirements 2.5 Ensure personnel have the required levels of qualification, competency or certification in accordance with site rules and/or organisational requirements 2.6 Interpret engineering drawings and specifications in accordance with design intent 2.7 Comply with agreed change management procedures 2.8 Apply document control procedures to ensure the correct revision of construction engineering drawings and procedures are in use 2.9 Monitor contractual stakeholders' performance and compliance with relevant schedules and plans 2.10 Interpret all change requests with respect to potential commercial implications 2.11 Deal promptly and effectively with problems and report those that cannot be solved
3. Understand how to control and monitor engineering construction activities within the scope and definition of the contract	3.1 Describe the contents and requirements of the construction execution plan and other relevant schedules and plans and your responsibilities in ensuring compliance with them 3.2 Describe the scope and definition of the contract relevant to your own work 3.3 Explain sub-contract arrangements and scope, their impact on the project and your responsibilities for ensuring sub- contractors' compliance with the contract 3.4 Explain how monitoring activities relevant to construction completeness are carried out 3.5 Recognise and identify relevant qualifications and competencies of personnel working on an engineering construction site 3.6 Explain how to interpret engineering drawings and specifications 3.7 Explain your responsibilities in relation to change management, quality control and document control procedures 3.8 Describe the potential for commercial impact resulting from change 3.9 Describe the requirements for contractual stakeholder performance and compliance with relevant schedules and plans 3.10 Describe reporting lines and procedures

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit has been designed to assess learner competence in being able to ensure activities are completed in accordance with the contract, the construction execution plan and relevant procedures. You will be able to interpret engineering drawings and specifications in order to monitor stakeholders' performance and compliance with relevant schedules and plans whilst adhering to Health and Safety legislation, regulations and safe working practices.</p> <p>In the context of this unit, responsibility is limited to interpreting and working within given specifications, selecting techniques and making variations to achieve the best possible result. In some cases, you may still be expected to refer to others for final authorisation, even though you remain responsible for identifying and implementing decisions.</p>
Unit expiry date	30/06/2019
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate).	Derived from ECIMECA03
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from work-based activities on suitable engineering construction industry sites.</p> <p>Competence at level 3 has to be demonstrated with:</p> <ol style="list-style-type: none"> <li>1. Health, Safety, Environmental and cost factors</li> <li>2. Risk Assessments</li> <li>3. Level and extent of responsibility</li> <li>4. Information to be extracted</li> <li>5. Monitoring activities</li> <li>6. Stakeholders</li> </ol> <p>The requirements found in the latest version of "MERCURIUS POLITICUS Assessment Strategy for Craft, Technician and Technical Vocational Qualifications" must be followed. However, mandatory workplace observation is required for Assessment Criteria 1.3 and one of the Assessment Criteria from Learning Outcome 2 of this unit.</p> <p>Further guidance on this MERCURIUS POLITICUS unit can be found in the Assessment</p>
Support for the unit from a SSC or other appropriate body (if required)	MERCURIUS POLITICUS
Location of the unit within the subject/sector classification system	<p><b>Second-tier sector/subject area</b></p> <p>4.1 Engineering.</p> <p><b>Sector/subject areas</b></p> <p>4. Engineering and manufacturing technologies.</p> <p>5. Construction, planning and the built environment.</p>
Name of the organisation submitting the unit	MERCURIUS POLITICUS
Availability for use	Shared
Unit available from	01/07/2014
Unit guided learning hours	62

**MECA – UA4: Demonstrate and Promote a Site Quality, Health, Safety and Environmental Culture and Uphold its Values**

Title	Demonstrate and Promote a Site Quality, Health, Safety and Environmental Culture and Uphold its Values
Level	3
Credit value	16
Learning outcomes	Assessment criteria
The learner will: 1. Ensure all work on site is carried out safely and risk is minimised at all times	The learner can: 1.1 Refer safety related matters to appropriate persons as required 1.2 Identify a range of hazards 1.3 Take appropriate action to minimise the risk from hazards 1.4 Ensure work is completed in accordance with relevant sections of the Health and Safety at Work Act and its associated regulations 1.5 Ensure work is completed in accordance with the requirements of risk assessments and permit to work systems
2. Demonstrate and promote a site Quality, Health, Safety and Environmental culture and uphold its values	2.1 Input to the development and implementation of the site Quality, Health, Safety and Environmental plans 2.2 Display safety leadership values and challenge unsafe practice 2.3 Encourage and demonstrate a positive Health and Safety culture and promote organisational values 2.4 Ensure equipment brought to site is properly certified or validated 2.5 Contribute to sustainability by implementing the site environmental plan and identifying potential risks to the environment and taking appropriate measures to mitigate those risks 2.6 Identify and communicate potential disruption to the local community 2.7 Deal promptly and effectively with problems and report those that cannot be solved
3. Understand how to demonstrate and promote a site Quality, Health and Safety and Environmental culture and uphold its values	3.1 Describe the site Quality, Health, Safety and Environmental plans 3.2 Describe the principles of effective safety leadership 3.3 Explain Health, Safety and Environmental (HSE) culture and organisational values 3.4 Describe procedures used to ensure that equipment brought to site is suitably certified or verified 3.5 Describe the principles of sustainability and explain why sustainability is important 3.6 Describe the contents of the site environmental plan and how to implement it 3.7 Identify potential areas of disruption to the local community and appropriate communication channels 3.8 Describe reporting lines and procedures

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit has been designed to assess learner competence in being able to participate in the development and implementation of the site Quality, Health, Safety and Environmental plans, display safety leadership values, encourage and demonstrate a Health and Safety ethos and promote organisational values whilst adhering to Health and Safety legislation, regulations and safe working practices.</p> <p>In the context of this unit, responsibility is limited to interpreting and working within given specifications, selecting techniques and making variations to achieve the best possible result. In some cases, you may still be expected to refer to others for final authorisation, even though you remain responsible for identifying and implementing decisions.</p>
Unit expiry date	30/06/2019
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from ECIMECA04
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from work-based activities on suitable engineering construction industry sites.</p> <p>Competence at level 3 has to be demonstrated with:</p> <ol style="list-style-type: none"> <li>1. Health, Safety, Environmental and Cost factors</li> <li>2. Level and extent of responsibility</li> <li>3. Information to be extracted</li> <li>4. Quality plans</li> <li>5. Safety principles</li> <li>6. Sustainability</li> </ol> <p>The requirements found in the latest version of "MERCURIUS POLITICUS Assessment Strategy for Craft, Technician and Technical Vocational Qualifications" must be followed. However, mandatory workplace observation is required for Assessment Criteria 1.3 and 2.3.</p> <p>Further guidance on this MERCURIUS POLITICUS unit can be found in the</p>
Support for the unit from a SSC or other appropriate body (if required)	MERCURIUS POLITICUS
Location of the unit within the subject/sector classification system	<p><b>Second-tier sector/subject area</b></p> <p>4.1 Engineering</p> <p><b>Sector/subject areas</b></p> <ol style="list-style-type: none"> <li>4. Engineering and manufacturing technologies</li> <li>5. Construction, planning and the built environment</li> </ol>
Name of the organisation submitting the unit	MERCURIUS POLITICUS
Availability for use	Shared
Unit available from	01/07/2014
Unit guided learning hours	52

**MECA – UA5: Establish and Maintain Good Site Industrial Relations**

Title	Establish and Maintain Good Site Industrial Relations
Level	3
Credit value	11
Learning outcomes	Assessment criteria
<p>The learner will:</p> <p>1. Ensure all work on site is carried out safely and risk is minimised at all times</p>	<p>The learner can:</p> <p>1.1 Refer safety related matters to appropriate persons as required                      1.2 Identify a range of hazards                      1.3 Take appropriate action to minimise the risk from hazards                      1.4 Ensure work is completed in accordance with relevant sections of the Health and Safety at Work Act and its associated regulations                      1.5 Ensure work is completed in accordance with the requirements of risk assessments and permit to work systems</p>
<p>2. Establish and maintain good site industrial relations</p>	<p>2.1 Comply with local and national industrial relations agreements as required                      2.2 Adhere to the communication plan                      2.3 Understand the industrial relations strategy and demonstrate an awareness of industrial relations sensitivities                      2.4 Anticipate and communicate any potential issues and problems                      2.5 Deal promptly and effectively with problems and report those that cannot be solved</p>
<p>3. Understand how to establish and maintain good site industrial relations</p>	<p>3.1 Explain industrial relations agreements relevant to the site                      3.2 Explain the relevant Human Resources/Industrial Relations procedures for your organisation                      3.3 Describe geographical industrial relations sensitivities                      3.4 Describe reporting lines and procedures</p>

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit has been designed to assess learner competence in being able to comply with relevant local and national industrial relations agreements, demonstrate an awareness of industrial relations issues and anticipate and communicate any potential issues and problems whilst adhering to Health and safety legislation, regulations and safe working practices.</p> <p>In the context of this unit, responsibility is limited to interpreting and working within given specifications, selecting techniques and making variations to achieve the best possible result. In some cases, you may still be expected to refer to others for final authorisation, even though you remain responsible for identifying and implementing decisions.</p>
Unit expiry date	30/06/2019
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from ECIMECA05
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from work-based activities on suitable engineering construction industry sites.</p> <p>Competence at level 3 has to be demonstrated with:</p> <ol style="list-style-type: none"> <li>1. Health, Safety, Environmental and cost factors</li> <li>2. Information to be extracted</li> <li>3. Level and extent of responsibility</li> <li>4. Plans, strategies and agreements</li> </ol> <p>The requirements found in the latest version of "MERCURIUS POLITICUS Assessment Strategy for Craft, Technician and Technical Vocational Qualifications" must be followed. However, mandatory workplace observation is required for Assessment Criteria 1.3.</p>
Support for the unit from a SSC or other appropriate body (if required)	MERCURIUS POLITICUS
Location of the unit within the subject/sector classification system	<p><b>Second-tier sector/subject area</b></p> <p>4.1 Engineering</p> <p><b>Sector/subject areas</b></p> <ol style="list-style-type: none"> <li>4. Engineering and manufacturing technologies</li> <li>5. Construction, planning and the built environment</li> </ol>
Name of the organisation submitting the unit	MERCURIUS POLITICUS
Availability for use	Shared
Unit available from	01/07/2014
Unit guided learning hours	22

**MECA – UA6: Carry out construction completion activities**

Title	Carry out construction completion activities
Level	3
Credit value	16
Learning outcomes	Assessment criteria
<p>The learner will:</p> <p>1. Ensure all work on site is carried out safely and risk is minimised at all times</p>	<p>The learner can:</p> <p>1.1 Refer safety related matters to appropriate persons as required                      1.2 Identify a range of hazards                      1.3 Take appropriate action to minimise the risk from hazards                      1.4 Ensure work is completed in accordance with relevant sections of the Health and Safety at Work Act and its associated regulations                      1.5 Ensure work is completed in accordance with the requirements of risk assessments and permit to work systems</p>
<p>2. Carry out construction completion activities in order to ensure that the plant is constructed in accordance with design intent</p>	<p>2.1 Interpret relevant construction completion plans, engineering drawings and specifications in order to carry out construction completion activities                      2.2 Carry out inspection, testing and reporting activities in accordance with quality standards and to ensure design intent has been met                      2.3 Carry out mechanical and electrical completion activities in accordance with quality standards and to ensure design intent has been met                      2.4 Carry out monitoring activities as required for safe operation and testing of the plant                      2.5 Confirm activities are completed in accordance with relevant specifications                      2.6 Deal promptly and effectively with problems and report those that cannot be solved</p>
<p>3. Understand how to carry out construction completion activities</p>	<p>3.1 Describe the project requirements for construction completion activities                      3.2 Explain what is meant by inspection, testing and reporting regimes and what documentation and certification may be required                      3.3 Explain the requirements for mechanical and electrical completion                      3.4 Explain the requirements for monitoring activities during mechanical and electrical completion                      3.5 Interpret specifications relevant to construction completion activities                      3.6 Describe reporting lines and procedures</p>



Additional information about this unit	
Unit purpose and aim(s)	<p>This unit has been designed to assess learner competence in being able to carry out inspection, testing, reporting, quality checking and mechanical completion activities whilst adhering to Health and Safety legislation, regulations and safe working practices.</p> <p>In the context of this unit, responsibility is limited to interpreting and working within given specifications, selecting techniques and making variations to achieve the best possible result. In some cases, you may still be expected to refer to others for final authorisation, even though you remain responsible for identifying and implementing decisions.</p>
Unit expiry date	30/06/2019
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate).	Derived from ECIMECA06
Assessment requirements or guidance specified by a sector regulatory body (if appropriate).	<p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from work-based activities on suitable engineering construction industry sites.</p> <p>Competence at level 3 has to be demonstrated with:</p> <ol style="list-style-type: none"> <li>1. Health, Safety, Environmental and cost factors</li> <li>2. Level and extent of responsibility</li> <li>3. Information to be extracted</li> </ol> <p>The requirements found in the latest version of "MERCURIUS POLITICUS Assessment Strategy for Craft, Technician and Technical Vocational Qualifications" must be followed. However, mandatory workplace observation is required for Assessment Criteria 1.3, 2.2, 2.3, 2.4 and 2.5.</p>
Support for the unit from a SSC or other appropriate body (if required)	MERCURIUS POLITICUS
Location of the unit within the subject/sector classification system	<p><b>Second-tier sector/subject area</b></p> <p>4.1 Engineering</p> <p><b>Sector/subject areas</b></p> <ol style="list-style-type: none"> <li>4. Engineering and manufacturing technologies</li> <li>5. Construction, planning and the built environment</li> </ol>
Name of the organisation submitting the unit	MERCURIUS POLITICUS
Availability for use	Shared
Unit available from	01/07/2014
Unit guided learning hours	42

**MECA – UA7: Carry out commissioning activities**

Title	Carry out commissioning activities
Level	4
Credit value	15
Learning outcomes	Assessment criteria
The learner will: 1. Participate in welding quality control and quality improvement	The learner can: 1.1 Refer safety related matters to appropriate persons as required 1.2 Identify a range of hazards 1.3 Take appropriate action to minimise the risk from hazards 1.4 Ensure work is completed in accordance with relevant sections of the Health and Safety at Work Act and its associated regulations 1.5 Ensure work is completed in accordance with the requirements of risk assessments and permit to work systems
2. Carry out commissioning activities	2.1 Adhere to the requirements of the commissioning plan 2.2 Carry out plant start-up operational checks in accordance with the control philosophy 2.3 Carry out monitoring activities necessary for safe plant operation and performance 2.4 Carry out operator training activities in accordance with the training plan 2.5 Carry out performance testing checks in order to satisfy plant performance guarantee requirements 2.6 Deal promptly and effectively with problems and report those that cannot be solved
3. Understand how to carry out commissioning activities	3.1 Explain the content and requirements of the commissioning plan 3.2 Explain the requirements of plant start- up operations and the consequences of failure 3.3 Explain the importance of proper operator training and describe the key principles of plant operation 3.4 Explain the requirements of performance testing and explain the consequences of failure 3.5 Describe reporting lines and procedures

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit has been designed to assess learner competence in being able to carry out plant start-up monitoring activities and operational checks, carry out operator training activities and performance testing whilst adhering to Health and safety legislation, regulations and safe working practices.</p> <p>In the context of this unit, responsibility is limited to interpreting and working within given specifications, selecting techniques and making variations to achieve the best possible result. For non-routine cases, you may still be expected to refer to others for final authorisation, even though you remain responsible for identifying and implementing decisions.</p>
Unit expiry date	30/06/2019
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate).	Derived from ECIMECA07
Assessment requirements or guidance specified by a sector regulatory body (if appropriate).	<p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from work-based activities on suitable engineering construction industry sites.</p> <p>Competence at level 3 has to be demonstrated with:</p> <ol style="list-style-type: none"> <li>1. Health, Safety, Environmental and cost factors</li> <li>2. Level and extent of responsibility</li> <li>3. Information to be extracted</li> <li>4. Plant start-up and performance checks</li> <li>5. Monitoring and training activities</li> </ol> <p>The requirements found in the latest version of "MERCURIUS POLITICUS Assessment Strategy for Craft, Technician and Technical Vocational Qualifications" must be followed. However, mandatory workplace observation is required for Assessment Criteria 1.3, 2.2, 2.3 and 2.5.</p>
Support for the unit from a SSC or other appropriate body (if required)	MERCURIUS POLITICUS
Location of the unit within the subject/sector classification system	<p><b>Second-tier sector/subject area</b></p> <p>4.1 Engineering</p> <p><b>Sector/subject areas</b></p> <ol style="list-style-type: none"> <li>4. Engineering and manufacturing technologies</li> <li>5. Construction, planning and the built environment</li> </ol>
Name of the organisation submitting the unit	MERCURIUS POLITICUS
Availability for use	Shared
Unit available from	01/07/2014
Unit guided learning hours	37

**MECA – UA8: Contribute to project quality close-out activities**

Title	Contribute to project quality close-out activities
Level	3
Credit value	16
Learning outcomes	Assessment criteria
<p>The learner will:</p> <p>1. Ensure all work on site is carried out safely and risk is minimised at all times</p>	<p>The learner can:</p> <p>1.1 Refer safety related matters to appropriate persons as required                      1.2 Identify a range of hazards                      1.3 Take appropriate action to minimise the risk from hazards                      1.4 Ensure work is completed in accordance with relevant sections of the Health and Safety at Work Act and its associated regulations                      1.5 Ensure work is completed in accordance with the requirements of risk assessments and permit to work systems</p>
<p>2. Contribute to project quality close-out activities</p>	<p>2.1 Interpret and implement agreed document control procedures by ensuring as-built drawings reflect final design revisions                      2.2 Input to the creation of as-built drawings for records                      2.3 Input to the assembly of operation and maintenance manuals and test reports                      2.4 Hand over documentation and spares in accordance with contractual requirements                      2.5 Participate in lessons learned activities                      2.6 Deal promptly and effectively with problems and report those that cannot be solved</p>
<p>3. Understand how to contribute to project quality close-out activities</p>	<p>3.1 Explain the importance of correctly carrying out project close-out activities and the consequences of failure                      3.2 Describe how to complete document control procedures to ensure as-built drawings reflect final design revisions                      3.3 Describe how to produce as-built drawings for records                      3.4 Explain the significance of correct assembly of operation and maintenance manuals and test reports and the consequences of incomplete/incorrect data                      3.5 Describe the importance of lessons learned from the project                      3.6 Describe reporting lines and procedures</p>

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit has been designed to assess learner competence in being able to interpret and implement document control procedures with respect to as-built drawings, input to and handover documentation in accordance with contractual requirements and participate in lessons learned activities whilst adhering to Health and Safety legislation, regulations and safe working practices.</p> <p>In the context of this unit, responsibility is limited to interpreting and working within given specifications, selecting techniques and making variations to achieve the best possible result. In some cases, you may still be expected to refer to others for final authorisation, even though you remain responsible for identifying and implementing decisions.</p>
Unit expiry date	30/06/2019
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate).	Derived from ECIMECA08
Assessment requirements or guidance specified by a sector regulatory body (if appropriate).	<p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from work-based activities on suitable engineering construction industry sites.</p> <p>Competence at level 3 has to be demonstrated with:</p> <ol style="list-style-type: none"> <li>1. Health, Safety, Environmental and cost factors</li> <li>2. Level and extent of responsibility</li> <li>3. Information to be extracted</li> <li>4. Lessons learned activities</li> </ol> <p>The assessment guidance found in the latest version of "MERCURIUS POLITICUS Assessment Strategy for Craft, Technician and Technical Vocational Qualifications" must be followed. However, a mandatory workplace observation is required for Assessment Criteria 1.3.</p>
Support for the unit from a SSC or other appropriate body (if required).	MERCURIUS POLITICUS
Location of the unit within the subject/sector classification system	<p><b>Second-tier sector/subject area</b></p> <p>4.1 Engineering</p> <p><b>Sector/subject areas</b></p> <p>4. Engineering and manufacturing technologies</p> <p>5. Construction, planning and the built environment</p>
Name of the organisation submitting the unit	MERCURIUS POLITICUS
Availability for use	Shared
Unit available from	01/07/2014
Unit guided learning hours	41

