QUALIFICATION SPECIFICATION

ECITB Level 2 Diploma in Supporting the Installation of Engineering Construction Plant and Systems (RQF)

Ofqual QN: 603/3968/8
QW Approval No.: C00/5048/8

Contains the following pathways:

- **Mechanical Fitting**
- **Pipefitting**
- **Plating**

Revisions to this document

The table below sets out all revisions made to this document since it was first issued, and the dates on which the revisions were effective from.

Version	Revision	Page	Effective date
2-2	Section 1.4 'Language of Assessment' added	5	01.11.26

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ECITB Level 2 Diploma in Supporting the Installation of Engineering Construction Plant and Systems (RQF)

1. Introduction

1.1 Objective and overview

The objective of this vocational competence qualification is to provide recognition that a candidate has demonstrated the required level of technical competence to support engineering activities and operations on projects in sectors such as engineering, manufacturing, construction, infrastructure, pharmaceuticals, utilities, transport and defence in **one** of the following pathways:

- Mechanical Fitting
- Pipefitting
- Plating

The candidate is required to select ONE discipline pathway ONLY when registering on the qualification. Successful completion of the qualification pathway will lead to the candidate being awarded an:

- ECITB Level 2 Diploma in Supporting the Installation of Engineering Construction Plant and Systems (RQF) – Mechanical Fitting
- ECITB Level 2 Diploma in Supporting the Installation of Engineering Construction Plant and Systems (RQF) – Pipefitting
- ECITB Level 2 Diploma in Supporting the Installation of Engineering Construction Plant and Systems (RQF) – Plating

This qualification is based on National Occupational Standards (NOS) and has been designed following consultation with industry employers and stakeholders on a qualifications strategy which allows for a wider use of off the job assessment and to further sector needs to improve transferability of skills across the different sectors that comprise the industry. The detail and scope of the assessment criteria within this qualification has been developed by the Engineering Construction Industry Training Board (ECITB) Standards Setting Organisation in conjunction with employers, trainers, and assessors through workshops and consultations.

1.2 Engineering Construction Operatives

Engineering construction industries require the support of operatives to construct, commission, maintain, overhaul and decommission a wide range of capital infrastructure, plant and systems. These activities assist in maintaining the safety, integrity and effective operation of plant and equipment in a wide range of industries of national importance including power (coal, gas, nuclear, wind and other renewables), infrastructure (water, road, rail), petrochemical, oil and gas, steel, and food and drink processing.

Operatives work under the direct supervision of a crafts person, charge hand or supervisor to shape, assemble, position, install and dismantle a wide range of engineering construction components and materials; pipefitters and platers also carry out simple welding tasks. They assist in the assembly, installation, maintenance and repair of a wide range engineering construction plant and associated components. They are able to interpret specifications, engineering drawings and diagrams and understand the on-site hazards and health, safety and environmental requirements of plant and systems.

Under direct supervision, operatives are responsible for the quality of their own work and ensure their work is completed safely and meets the specification whilst increasing their own skills and capabilities. They are based on-site or in workshops/fabrication facilities where they work on various types of engineering infrastructure plant and systems dependent on their given sector.

1.3 Entry requirements

There are no mandatory entry requirements. However, due to the level and complexity of the subject, it is recommended that candidates should have attained GCSE grade "G/1" or above or RQF Functional Skills Level 1 or above in English (Language) and Mathematics or are able to demonstrate evidence of other suitable attainment or experience. A candidate's individual circumstances will determine if this qualification is appropriate and the Approved Centre will work with the prospective candidate and, where appropriate, employer to determine the candidate's suitability for the qualification.

1.4 Language of Assessment

This qualification is available and assessed in English only.

Centres must ensure, prior to registration, that candidates have a sufficient standard of English language competence to understand the qualification requirements, access learning and assessment materials, communicate effectively, and generate evidence that meets the required assessment standards. This applies particularly to candidates for whom English is not their first language.

A candidate's English language ability must be sufficient to enable them to demonstrate the required knowledge, skills, and behaviours independently, without the need for translation or language support that could compromise the validity or reliability of the assessment. Candidates must also be able to communicate effectively in workplace and assessment environments and carry out activities safely and appropriately in accordance with qualification requirements.

1.5 Achievement

This qualification consists of 8 mandatory units per pipefitting and plating pathway; and 7 mandatory units for the mechanical fitting pathway. A candidate must successfully meet the selected discipline pathway requirements of each of the specified units in order to attain this qualification. This specification details the learning outcomes and assessment criteria that a candidate must meet in order to demonstrate the acquisition of the knowledge, skills and behaviours (KSBs) to be awarded a vocational ECITB Level 2 Diploma in Supporting the Installation of Engineering Construction Plant and Systems (RQF) in either Mechanical Fitting or Pipefitting or Plating. Mandatory observation of the candidate by an Awarding Organisation (AO) assessor is required to achieve this qualification.

The contents of each unit interrelate and the AO does not issue credit certificates for completion of standalone units.

1.6 Assessment

Assessment is through a combination of ECITB AO online knowledge tests, observed skills assessment in the 'live' workplace or under simulated workplace conditions; portfolio of evidence and; a final recorded technical discussion.

1.7 Total Qualification Time (TQT), level & duration

The TQT for this qualification is 845 hours, this reflects the lowest TQT pathway. The guided learning and TQT for each unit is in the table below. The amount of time taken to achieve this Level 2 Diploma is typically 6-9 months.

Unit	Guided Learning (hours)	Total Qualification Time (hours)
Unit SIPS01 Work safely, effectively, ethically and sustainably, managing risk and hazards	175	200
Unit SIPS02 Interpret and follow documentation and procedures including prepare and reinstate the work area	120	140
Unit SIPS03 Mark out to the required specification	50	67
Unit SIPS04 Shape components by material removal using hand tools	70	87
Unit SIPS05 Support the assembly of components	140	157
Unit SIPS06 Support the positioning and installation of plant and equipment	80	97
Unit SIPS07 Support the dismantling of plant and equipment	80	97
Unit SIPS08 Support welding operations in engineering construction (pipefitting and plating only)	100	117

Unit SIPS08 is mandatory for the pipefitting and plating pathways and not applicable to the mechanical fitting pathway.

1.8 Equal opportunities, reasonable adjustments and special considerations

For information about fair assessment, equal opportunities, reasonable adjustments and special considerations please refer to the ECITB AO Policies and Procedures published on the ECITB website.

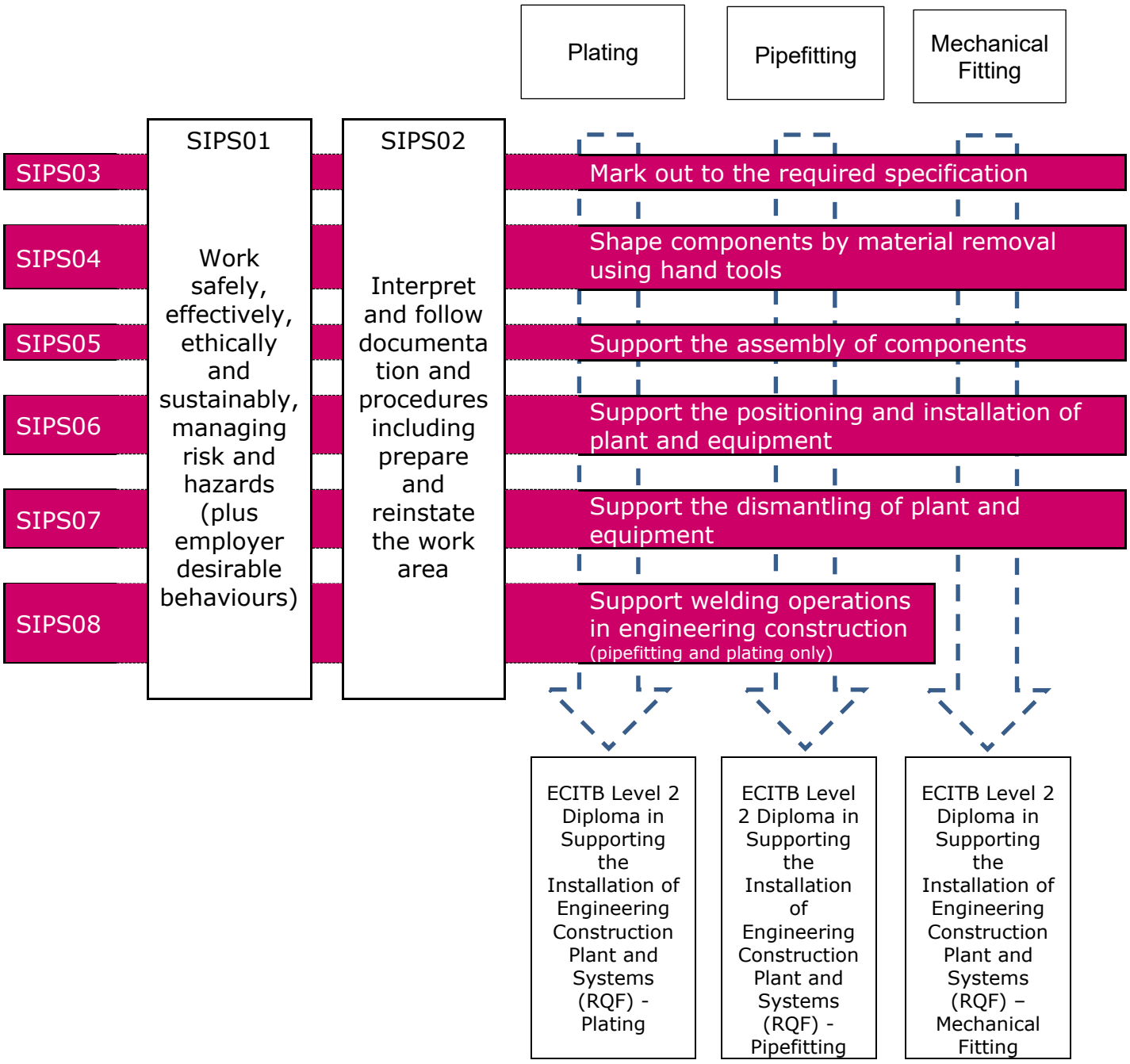
1.9 Career development within the Engineering Construction Industry

Completing this qualification can lead to a range of further career options. Those who wish to stay in engineering construction can develop their skills further, through additional qualifications and apprenticeships in their selected craft discipline at Level 3. This in turn if successfully completed, may lead to supervisory positions or into supporting engineering functions such as procurement, project management or project controls.

For more information about career progression go to the ECITB website www.ecitb.org.uk.

2. Qualification units

Schematic overview of this qualification



This qualification consists of 3 different pathways, the pipefitting and plating pathways comprise of 8 mandatory units whilst the mechanical fitting pathway comprises 7 mandatory units.

The underpinning knowledge, skills and behaviours (KSBs) within units SIPS01 and SIPS02 are demonstrated by candidates when they undertake the observed skills assessments of their selected discipline to demonstrate the application of the KSBs detailed in units SIPS03 to SIPS08.

This vocational qualification contains the following elements:

2.1 Underpinning knowledge, skills and behaviours

Units SIPS01 and SIPS02 detail the factual, procedural and theoretical knowledge that the candidate must acquire and also demonstrate on plant, equipment and systems of their selected discipline:

- Relevant national and industry health, safety and environmental standards and legislation and those relevant to the specific disciplines, as appropriate.
- Site safety responsibilities, own and others including: first aid procedures, evacuation procedures, challenging unsafe practices and reporting.
- Awareness of types and effects of hazards, safety assessment methods and techniques and how to minimise associated risks.
- Relationships: importance of and understanding of work relationship problems, under direct supervision and within limits of own responsibility.
- Lines of communication, reporting lines and levels of responsibility in the workplace.
- Quality management procedures and the importance of following them.
- The importance of ethical working and the sustainable use of resources including: codes of conduct, minimising the impact of work on the environment.
- The importance of questioning.
- Procedures and related documentation and responsibility for reporting and following procedures.
- Preparation and reinstatement of the work area including: preparing, checking and handling material; types of equipment and the related care and control procedures; storing and disposing of material.

2.2 Employer-desirable behaviours and attitudes

The candidate must demonstrate the application of the following employer desirable behaviours during the observed skills assessments:

- Safety conscious - works safely at all times.
- Risk aware - identifies hazards and minimises risk.
- Effective communicator - works effectively with others including keeping others informed.
- Quality focus – ensures own work is completed to an appropriate level of quality.
- Conscientious - follows procedures and completes reporting documentation accurately and correctly.
- Initiative – deals with routine problems effectively and highlights those that cannot be solved.
- Ethical and sustainability behaviours such as:
    - Understands and conforms to environmental expectations.
    - Uses resources efficiently and effectively.
    - Treats all people fairly and with respect.

2.3 Specific knowledge and skills

The candidate is required to effectively demonstrate theoretical, factual and procedural knowledge and practical skills of the following units that comprise the qualification in relation to their chosen pathway in accordance with the stated assessment criteria and scope of assessment provided in this document:

SIPS01 Work safely, effectively, ethically and sustainably, managing risks and hazards.

SIPS02 Interpret and follow documentation and procedures including prepare and

reinstate the work area.

SIPS03 Mark out to the required specification.

SIPS04 Shape components by material removal using hand tools.

SIPS05 Support the assembly of components.

SIPS06 Support the positioning and installation of plant and equipment.

SIPS07 Support the dismantling of plant and equipment.

SIPS08 Support welding operations in engineering construction (pipefitting and plating only)

2.4 Further information

For further information either visit the ECITB website or contact ECITB Awarding Organisation:

Tel: 01923 260000
Email: Qualifications@ecitb.org.uk
Website: www.ecitb.org.uk

2.5 Units

Unit SIPS01 Work safely, effectively, ethically and sustainably, managing risk and hazards

This unit applies to all pathways.

Learning outcomes for this unit:

1. The candidate can describe health and safety legislation, regulations, safe working practices, personal site safety responsibilities and demonstrate what 'work safely' at all times means when supporting the installation of engineering construction plant and systems.
2. The candidate can describe risk and hazard management and demonstrate the ability to identify and take action to deal with potential hazards.
3. The candidate can establish and maintain productive working relationships.
4. The candidate understands lines of communication, responsibilities; can describe quality management systems and can demonstrate effective communication in the context of supporting the installation of engineering construction plant and systems.
5. The candidate understands codes of conduct, the importance of ethical working and the need to undertake activities in a way that contributes to environmental sustainability.
6. The candidate is able to work effectively under supervision when supporting the installation of engineering construction plant and systems by demonstrating all employer desirable behaviours.

Knowledge assessment criteria:
The candidate must demonstrate an understanding of the following in order to satisfy the skills assessment criteria:

HEALTH AND SAFETY LEGISLATION AND REGULATIONS

K1.1 The requirements of the main health and safety legislation relevant to the role.
K1.2 The purpose and nature of risk assessments, method statements, and permit to work systems, and the relevance of local procedures and guidance notes.
K1.3 The consequences for employers and employees of not fulfilling their legal health and safety responsibilities.
K1.4 The importance of personal behaviour in maintaining workplace standards.

PERSONAL SITE SAFETY RESPONSIBILITIES

K1.5 The need for health and safety training for themselves and others in a workplace, the procedures for requesting training and who to ask for help in understanding the work.
K1.6 Where to get information relating to the safe use of equipment and how to ensure the equipment is used safely.
K1.7 When personal protective equipment should be used and how to select and use the correct equipment for the work to be undertaken.
K1.8 The potential for different types of injury, including slower developing injuries and how they can be prevented.

K1.9 The checks which are needed to make sure that portable electrical appliances are safe to use.
K1.10 What a safe system for plant isolation should include including electrical isolation and why low voltage is generally safer in relation to health and safety.
K1.11 The risks from overhead cables and how to control them.

FIRST AID

K1.12 First aid procedures as used in a typical company and where information about them can be obtained.
K1.13 Which first aid procedures typically apply in a workplace including:
a) The sources of competent assistance.
b) How to find local first aid facilities.
c) How to alert or summon professional authorities.

EMERGENCY AND EVACUATION PROCEDURES

K1.14 Emergency procedures and evacuation procedures as used in a typical company and where information about them can be obtained from including the different alarms.
K1.15 Reporting documentation and systems including: emergencies, accidents and potential incidents.
K1.16 How to call for expert help in the event of an emergency or an unplanned event occurring, following relevant procedures.
K1.17 How to follow shutdown, evacuation and rescue procedures promptly and correctly.

HAZARDS AND HAZARD SPOTTING

K1.18 What is a hazard and the common types of hazard associated with processes, tools, equipment and materials.
K1.19 Where information on hazard spotting and safety assessment techniques can be found.
K1.20 Hazard spotting and safety assessment techniques, which apply in a typical work location.
K1.21 The effects of hazards on persons, property and the environment.
K1.22 Who to call for appropriate help using warning systems as appropriate in relation to hazards.
K1.23 What must be done when transporting hazardous substances around a site.

MANAGING HAZARDS AND THE ASSOCIATED RISK

K1.24 What the individual's responsibilities are in terms of dealing with and notifying others of hazards including what should be reported, how, and the related documentation.
K1.25 The types of actions that are required to deal with and minimise the risks from different hazards.
K1.26 What risk is in relation to health and safety, its importance and the consequences of poor risk management.

MAINTAINING WORKING RELATIONSHIPS

K1.27 Why it is important to create and maintain working relationships.
K1.28 The different problems that can affect working relationships and the actions that can be taken to deal with specific difficulties.

REPORTING LINES, COMMUNICATION AND QUALITY MANAGEMENT

K1.29 The responsibilities of an operative in a typical workplace and the responsibilities of others within a typical work location.
K1.30 The importance of reporting lines, procedures, systems and documentation and the

consequences of failing to follow them.
K1.31 The limits of own responsibility and the limits of responsibility of crafts persons and supervisors when seeking clarification on issues.
K1.32 Quality management procedures and the importance of following them.
K1.33 The importance of dealing promptly and effectively with routine problems and reporting those which cannot be solved.

ETHICS AND ENVIRONMENTAL SUSTAINABILITY
K1.34 The purpose of ethics and environmental sustainability in a typical workplace.
K1.35 Codes of conduct, including relevant professional codes of conduct relevant to the role.
K1.36 The importance of using resources efficiently and effectively.
K1.37 What working ethically means in terms of treating all people fairly and with respect and displaying honesty, integrity, accuracy and rigour.
K1.38 How the role impacts on the environment and how this impact can be reduced.

Skills assessment criteria:

The candidate must demonstrate the following on plant, equipment and components of their selected discipline during the observed skills assessment of units SIPS03 to SIPS08, specifically the ability to:

SKILLS FOR WORKING SAFELY
S1.1 Work safely at all times complying with health and safety and other relevant guidelines and procedures.
S1.2 Deal safely with dangers that can be contained using appropriate equipment and materials, in accordance with procedures.
S1.3 Select the correct personal protective equipment for the work to be undertaken.

SKILLS FOR MANAGING HAZARDS AND MINIMISING RISK
S1.4 Identify potential hazards in the workplace including hazardous processes, tools, equipment and materials.
S1.5 Safely check for potential hazards in accordance with agreed and approved procedures.
S1.6 Take appropriate action upon identification of a hazard or emergency to minimise the risk from it.
S1.7 Report in accordance with procedures/risk control strategy.

SKILLS FOR WORKING RELATIONSHIPS
S1.8 Develop working relationships with a range of people.
S1.9 Deal with disagreements in a professional and constructive manner so that effective relationships are maintained.

SKILLS FOR REPORTING LINES, COMMUNICATION AND QUALITY PROCEDURES
S1.10 Keep others informed about work plans and activities which affect them – either formal/informal, written or verbal.
S1.11 If needed, seek assistance in relation to work related activities from others in a polite and courteous way without causing undue disruption to normal working activities.
S1.12 Respond in a timely and positive way when others ask for help or information e.g. clarify exactly what is required.
S1.13 Follow quality requirements.

S1.14 Deal with routine problems appropriately if and when they arise.

SKILLS FOR SUSTAINABILITY AND ETHICS
S1.15 Treat everyone fairly and with respect.
S1.16 Demonstrate accuracy and rigour when undertaking practical procedures.
S1.17 Deal effectively with resources taking environmental considerations into account.

Behaviours assessment criteria:
The candidate must demonstrate the following as part of the observed skills assessment of units SIPS03 to SIPS08 (SIPS07 for mechanical fitting) or provide additional evidence as part of their qualification portfolio of evidence, specifically:

EMPLOYER DESIRABLE BEHAVIOURS
B1.1 Safety conscious – works safely at all times.
B1.2 Risk aware – identifies hazards and minimises risk.
B1.3 Effective communicator – works effectively with others including keeping others informed.
B1.4 Quality focus – ensures own work is completed to an appropriate level of quality.
B1.5 Conscientious – follows procedures and completes documentation accurately and correctly.
B1.6 Initiative – deals with routine problems effectively and highlights those that cannot be solved.
B1.7 Ethical and sustainability behaviours such as:
a) Understands and conforms to environmental expectations.
b) Uses resources efficiently and effectively.
c) Treats all people fairly and with respect.

Unit SIPS02 Interpret and follow documentation and procedures including prepare and reinstate the work area

This unit applies to all pathways.

Learning outcomes:

1. The candidate must demonstrate that they can interpret and follow specifications, plans and schedules so that they are able to carry out the role effectively.
2. The candidate must demonstrate that they can follow reporting procedures, documentation and completion requirements as required to carry out the role effectively.
3. The candidate can describe and demonstrate how to prepare and reinstate the work area, material and equipment safely and correctly before and after the installation of engineering construction plant and systems takes place.

Knowledge assessment criteria:
The candidate must demonstrate an understanding of the following in order to satisfy the skills assessment criteria:

DOCUMENTATION

K2.1 The principles, uses and conventions of:
- a) Method statements.
- b) Risk Assessments.
- c) Technical drawings.
- d) Related specifications.
- e) Manufacturers' specifications.
- f) Product worksheets.
- g) BS/EN standards.

K2.2 The information detailed in the diagrams in engineering drawings and related specifications and how it relates to the physical component(s) and activities.

K2.3 The diagrams and key information found in:
- a) Manufacturers' specifications.
- b) Fabrication and installation instructions and specifications.
- c) Parts catalogues.
- d) Reference charts and tables.

K2.4 Where to find information that may be necessary in order to support the installation of engineering construction plant and systems.

K2.5 Installation plans and schedules and their use.

Skills assessment criteria:
The candidate must demonstrate the ability to:

DOCUMENTATION

S2.1 Check the validity of the documentation being used.

S2.2 Interpret and follow specifications, engineering drawings and work instructions including:
- a) Method statements.
- b) Risk Assessments.
- c) Technical drawings.
- d) Related specifications.
- e) Manufacturers' specifications.
- f) Product worksheets.
- g) BS/EN standards.

S2.3 Interpret and follow equipment manuals.

S2.4 Interpret installation plans and schedules.

PROCEDURES

S2.5 Follow authorisation procedures.

S2.6 Follow procedures and report on the completion of activities in accordance with procedures.

S2.7 Complete all relevant documentation correctly and accurately at all stages to include:
- a) Pre-task risk assessments.
- b) Authorisation process and

K2.6 The importance of version control and ensuring documentation is current and valid.

PROCEDURES

K2.7 Typical authorisation procedures.

K2.8 The procedures used to report on activities and the related reporting documentation. In other words - who to report to, what to report and when to report.

K2.9 The importance of checking and confirming procedures have been followed and documentation correctly completed.

PREPARE AND REINSTATE THE WORK AREA

K2.10 The consequences/hazards of incorrectly preparing or reinstating the work areas, material and equipment.

K2.11 The procedures for the connection and operation of applicable services and equipment including but not limited to pneumatic, electric, gas and hydraulic.

K2.12 The types of equipment used and explain the care and control procedures.

K2.13 How to check materials for correct specification, quantity and quality.

K2.14 Material handling techniques and preparation methods.

K2.15 Storage methods and procedures.

K2.16 Typical waste minimisation and disposal procedures.

procedures.

c) Isolation processes where relevant.
d) Record information and where appropriate test results.
e) Commissioning information.

S2.8 Report any instance where the activities cannot be fully met or where there are identified defects or variations from the specification which are outside the planned schedule.

S2.9 Check required reporting documentation is completed correctly once the activity is completed.

PREPARE AND REINSTATE THE WORK AREA

S2.10 Follow safety procedures, risk assessment and methods of work when preparing and reinstating the work area, materials, tools and equipment.

S2.11 Obtain, check against relevant specification and prepare the appropriate tools, materials and equipment and check:

- Quantities.
- That they are in a safe and usable condition.

S2.12 Ensure that all necessary service supplies are connected correctly and ready for use.

S2.13 Ensure that any stored energy or substances are released correctly and safely, where appropriate.

S2.14 Ensure all isolations and disconnections to the equipment are completed in line with the approved procedures (stored energy, substances, air, fluids, gas, mechanical, electrical).

S2.15 Provide and maintain safe access to the work area.

S2.16 Check the workplace is as expected.

S2.17 Ensure that arrangements are made to protect other workers from activities likely to disrupt normal working.

SKILLS FOR REINSTATEMENT ONLY

Reinstate the work area to a safe condition taking safety and environmental considerations into account by:

	S2.18 Correctly disposing of waste materials. S2.19 Storing re-usable materials and equipment in accordance with procedures. S2.20 Ensuring any necessary connections to equipment are established and complete. S2.21 Minimising waste wherever possible.

Unit SIPS03 Mark out to the required specification

This unit applies to all pathways.

Learning outcome: The candidate understands the techniques used when marking out to specification and can mark out components safely and effectively to requirements.

Knowledge assessment criteria:	**Skills assessment criteria**:
The candidate must demonstrate an understanding of the following in order to satisfy the skills assessment criteria: K3.1 The identification of the correct version of drawings and specifications. K3.2 The principles, uses and conventions of engineering drawings and related specifications. K3.3 Surface preparation requirements and methods. K3.4 The tools, methods and techniques used for marking out. K3.5 Geometrical construction methods.	The candidate must demonstrate the ability to obtain and use the correct information for marking out: S3.1 Obtain and use the correct information for marking out. S3.2 Prepare suitable datum and marking out surfaces. S3.3 Mark out using approved methods. S3.4 Check the marking out complies with the specification.

Unit SIPS04 Shape components by material removal using hand tools

This unit applies to all pathways.

Learning outcome:
The candidate understands the techniques used and is able to shape components by material removal using hand tools.

Knowledge assessment criteria: The candidate must demonstrate an understanding of the following in order to satisfy the skills assessment criteria:	**Skills assessment criteria**: The candidate must demonstrate the ability to:
K4.1 The equipment, methods and techniques used to shape components by material removal using hand tools. K4.2 Types and application of hand and powered tools. K4.3 Checking methods and techniques. K4.4 How to identify defects in components.	S4.1 Confirm requirements for the component to be produced. S4.2 Shape the materials using appropriate shaping techniques. S4.3 Check that the requirements for shaping have been achieved. S4.4 Seek confirmation that the component is completed to the required specification.

Unit SIPS05 Support the assembly of components

This unit applies to all pathways.

Learning outcome:
The candidate understands and is able to support the assembly of components.

Knowledge assessment criteria: The candidate must demonstrate an understanding of the following in order to satisfy the skills assessment criteria:	**Skills assessment criteria**: The candidate must demonstrate the ability to:
K5.1 The uses of engineering drawings and specifications. K5.2 The methods and techniques used to assemble components. K5.3 Handling equipment and procedures. K5.4 Methods of providing temporary support. K5.5 Checking methods and techniques. K5.6 How to identify defects in products and assets.	S5.1 Follow relevant instructions, assembly drawings and specifications. S5.2 Assist in the assembly of components in the correct positions using approved methods and techniques. S5.3 Secure the components under supervision using the specified connectors and securing devices, if appropriate using temporary support. S5.4 Seek confirmation that the assembly is completed to the required specification.

Unit SIPS06 Support the positioning and installation of plant and equipment

This unit applies to all pathways.

Learning outcome: The candidate understands the techniques used and is able to assist with the installation of plant and equipment safely and effectively to requirements.

Knowledge assessment criteria: The candidate must demonstrate an understanding of the following in order to satisfy the skills assessment criteria:	**Skills assessment criteria**: The candidate must demonstrate the ability to:
K6.1 Installation techniques and procedures to be followed. K6.2 The tools used for positioning and installing plant and equipment. K6.3 The techniques for foreign material exclusion and the importance of this. K6.4 The types of defects that may be found when assembling plant and equipment.	S6.1 Follow relevant instructions, assembly drawings and specifications. S6.2 Check that all relevant components are free from damage S6.3 Use the appropriate methods and techniques to assist in the positioning and installation of the plant & equipment in their correct positions. S6.4 Undertake foreign material exclusion procedures, as appropriate. S6.5 Ensure the installation is protected from the environment and potential damage S6.6 Seek confirmation that the assembly is completed to the required specification.

Unit SIPS07 Support the dismantling of plant and equipment

This unit applies to all pathways.

Learning outcome:
The candidate understands and is able to support the dismantling of plant & equipment.

Knowledge assessment criteria: The candidate must demonstrate an understanding of the following in order to satisfy the skills assessment criteria:	**Skills assessment criteria**: The candidate must demonstrate the ability to:
K7.1 Component removal methods, techniques and procedures. K7.2 Safe release of stored energy or substances. K7.3 Installing support systems for dismantling. K7.4 The tools and techniques necessary to carry out the dismantling correctly and in accordance with engineering drawings and maintenance manuals. K7.5 Disposal of waste & redundant/obsolete equipment.	S7.1 Make all isolations and disconnections in line with approved procedures under supervision. S7.2 Ensure that any stored energy or substances are released safely and correctly. S7.3 Establish and where appropriate mark components for re-assembly. S7.4 Assist with dismantling to the agreed level using correct tools and techniques. S7.5 Assist with the removal of identified components using approved methods, tools and techniques. S7.6 Correctly store or dispose of components in accordance with approved procedures.

Unit SIPS08 Support welding operations in engineering construction

This unit is mandatory for pipefitting and plating pathways and not applicable to mechanical fitting.

Learning outcome: The candidate understands and is able to join materials by manually controlled welding processes.

Knowledge assessment criteria: The candidate must demonstrate an understanding of the following in order to satisfy the skills assessment criteria:	**Skills assessment criteria**: The candidate must demonstrate the ability to:
K8.1 Joining process(es), materials and procedures to be used. K8.2 The range of gases required for specific processes. K8.3 The range of consumables required for specific processes. K8.4 Cable management and inspection procedures. K8.5 Equipment setting, operating and care procedures required for specific processes. K8.6 Common weld defects and causes.	S8.1 Follow the relevant joining procedure and job instructions. S8.2 Ensure that the joint preparation complies with the specification. S8.3 Ensure that joining and related equipment and consumables are as specified and fit for purpose. S8.4 Make joints as specified using the appropriate welding technique. S8.5 Produce joints of the required quality and of specified dimensional accuracy. S8.6 Shut down equipment to a safe condition on completion of joining activities.