



# **Skills for Employment Investment Program (SEIP)**

## **COMPETENCY STANDARD FOR DUCT FITTING FOR AIR-CONDITIONING AND VENTILATION (CONSTRUCTION SECTOR)**

**Finance Division, Ministry of Finance  
Government of the People's Republic of Bangladesh**

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## Copyright

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The Competency Standard for Duct Fitting for Air-Conditioning and Ventilation is a document for the development of curricula, teaching and learning materials, and assessment tools. It also serves as the document for providing training consistent with the requirements of industry in order for individuals who graduated through the established standard via competency-based assessment to be suitably qualified for a relevant job.

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## List of Abbreviations

<b>General</b>	
BMET	Bureau of Manpower Employment and Training
B-SEP	Bangladesh Skills for Employment and Productivity
BTEB	Bangladesh Technical Education Board
DTE	Directorate of Technical Education
ILO	International Labor Organization
ISC	Industry Skills Council
NPVC	National Pre-Vocation Certificate
NTVQF	National Technical and Vocational Qualifications Framework
PPP	Public Private Partnership
SCDC	Standards and Curriculum Development Committee
SEIP	Skills for Employment Investment Program
TVET	Technical Vocational Education and Training
UoC	Unit of Competency
<b>Occupation Specific</b>	
OHS	Occupational health and safety
PPE	Personal protective equipment
SOP	Standard operating procedure

## Introduction

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The Skills for Employment Investment Program (SEIP) Project of the Finance Division of the Ministry of Finance has embarked on a project which aims to qualitatively and quantitatively expand the skilling capacity of identified public and private training providers by establishing and operationalising a responsive skill ecosystem and delivery mechanism through a combination of well-defined set of funding triggers and targeted capacity support.

Among the many components of the project, one is to promote a Market Responsive Inclusive Skills Training Delivery programme. Key priority economic growth sectors identified by the government have been targeted by the project to improve current job skills along with up-skilling of the existing workforce to ensure 'required skills to industry standards'. Training providers are encouraged and supported to work with industry to address identified skills and knowledge to enable industry growth and increased employment through the provision of market responsive inclusive skills training programmes. Priority sectors were identified to adopt a demand driven approach to training with effective inputs from Industry Skills Councils (ISC's), employer associations and employers.

This document is developed to improve skills and knowledge in accordance with the job roles, duties and tasks of the occupation and ensure that the required skills and knowledge are aligned to industry requirements.

The document also details the format, sequencing, wording and layout of the Competency Standard for an occupation which is comprised of Units of Competence and its corresponding Elements.

## Overview

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A **competency standard** is a written specification of the knowledge, skills and attitudes required for the performance of an occupation, trade or job corresponding to the industry standard of performance required in the workplace.

The purpose of a competency standards is to:

- provide a consistent and reliable set of components for training, recognising and assessing people's skills, and may also have optional support materials
- enable industry recognised qualifications to be awarded through direct assessment of workplace competencies
- encourage the development and delivery of flexible training which suits individual and industry requirements
- encourage learning and assessment in a work-related environment which leads to verifiable workplace outcomes

Competency standards are developed by a working group comprised of national and international subject-matter experts, SEIP, BTEB, ISC, and industry experts to identify the competencies required of an occupation in a particular sector.

Competency standards describe the skills, knowledge and attitude needed to perform effectively in the workplace. Competency standards acknowledge that people can achieve technical and vocational competency in many ways by emphasising what the learner can do, not how or where they learned to do it.

With competency standards, training and assessment may be conducted at the workplace or at training institute or any combination of these.

Competency standards consist of a number of units of competency. A unit of competency describes a distinct work activity that would normally be undertaken by one person in accordance with industry standards.

Units of competency are documented in a standard format that comprises of:

- unit title
- nominal duration
- unit code
- unit descriptor
- elements and performance criteria
- variables and range statement
- curricular content guide
- assessment evidence guide

Together, all the parts of a unit of competency:

- describe a work activity
- guide the assessor to determine whether the candidate is competent or not yet competent

## Approval Sheet

Identification and validation of units of competency and elements for this occupation were made by experts within this sector. A series of meetings were held to accurately capture industry and employer needs and expectations, and develop the competency framework that would help to enhance the employability of the youth trained. This process started on 11 September 2018 and concluded with a validation workshop with working group on 30 October 2018.

### Experts Involved

Industry and subject-matter experts who provided their valuable inputs to develop this competency standard [May – October 2018]:

Name	Organisation	Designation
Nazrul Islam	BTTC	Senior Instructor
Md. Nazrul Islam	Ruposhi Group	Assessor
Jamal Uddin	Building Technology Ideas (bti) Limited	Project Engineer
Md. Merajul Islam	SOS Vocational Training Centre	Senior Instructor
Engr. Kazi Mojiruddin	Starlite Services Limited	Project Engineer
Abdul Kafi Kahn	BKTTC	Senior Instructor
Md. Sayedur Rahman	British Council - SD03	National Subject Matter Consultant - Construction Sector

### Validation Workshop

Working group formation and competency standard development workshop participants [held on 30 October 2018]:

Name	Organisation	Designation
Nazrul Islam	BTTC	Senior Instructor
Md. Nazrul Islam	Ruposhi Group	Assessor
Md. Merajul Islam	SOS Vocational Training Centre	Senior Instructor
Md. Ashraful Anefine	MAWTS	Industry Representative
Abdul Kafi Kahn	BKTTC	Senior Instructor
Md. Abu Naser Kahn	Montage Training and Certification	Instructor
Engr. Kazi Mojiruddin	BACI	Industry Representative
Engr. B.M. Mofizur Rahman	CISC	Curriculum Development and Training Executive

<b>Name</b>	<b>Organisation</b>	<b>Designation</b>
S.M. Shahjahan	BTEB	Deputy Director
Md. Abdur Razzaque	SEIP-BTEB	Specialist-1 (Competency Standards)
Syed Nasir Ershad	SEIP	AEPD (Public 1)
Mr. Md. Ahsan Habib	SEIP	TVET Specialist
Mr. Mohiuzzaman	SEIP	Course Specialist
David King	British Council - SD03	Team Leader
Mr. Sayedur Rahman	British Council - SD03	National Subject Matter Consultant - Construction Sector

The ensuing sections of this document comprise of a description of the relevant occupation, trade or job with all the key components of a unit of competency, including:

- a chart with an overview of all Units of Competency for the relevant occupation, trade or job including the Unit Codes and the Unit of Competency titles and corresponding Elements
- the Competency Standard that includes the Unit of Competency, Unit Descriptor, Elements and Performance Criteria, Range of Variables, Curricular Content Guide and Assessment Evidence Guide



### Committee Workshop

The National competency standards for National Skills Certificate in Duct Fitting for Air-Conditioning and Ventilation, NTVQF Level [INSERT LEVEL] qualification is a document developed by the Skill for Employment Investment Programme (SEIP), Finance Division, Ministry of Finance. This standard has been developed by an industry expert group under guidance of SEIP. The standard was approved by the SCDC [BTEB to insert date] at NTVQF Cell, BTEB.

### Respectable members of the SCDC:

Duct Fitting for Air-Conditioning and Ventilation - Level [INSERT LEVEL]		

## Course Structure

SL	Unit Code and Title		Level	Nominal Duration (Hours)
<b>Generic Competencies (3 units of competency required)</b>				
1	SEIP-CON-DFA-01-G	Carry out workplace interaction		14
2	SEIP-CON-DFA-02-G	Operate in a team environment		14
3	SEIP-CON-DFA-03-G	Carry out calculations and measurements		16
<b>Sub-Total</b>				<b>44</b>
<b>Sector-specific Competencies (3 units of competency required)</b>				
1	SEIP-CON-DFA-01-S	Apply occupational health and safety (OHS) practice in the workplace		14
2	SEIP-CON-DFA-02-S	Read and interpret sketches and drawings		10
3	SEIP-CON-DFA-03-S	Use hand and power tools		12
<b>Sub-Total</b>				<b>36</b>
<b>Occupation-specific Competencies (6 units of competency required)</b>				
1	SEIP-CON-DFA-01-O	Plan and prepare for duct fitting		30
2	SEIP-CON-DFA-02-O	Perform access cutting and encroachment work		30
3	SEIP-CON-DFA-03-O	Prepare ducting materials		40
4	SEIP-CON-DFA-04-O	Install ducting		100
5	SEIP-CON-DFA-05-O	Perform leak testing		50
6	SEIP-CON-DFA-06-O	Erect and dismantle scaffolding		30
<b>Sub-Total</b>				<b>280</b>
<b>Total Nominal Learning Hours</b>				<b>360</b>

## Competency Chart

Units of Competency	Elements		
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### Generic Specific (Basic) Competencies

Carry out workplace interaction SEIP-CON-DFA-01-G	Interpret workplace communication and etiquette	Read and understand workplace documents	Participate in workplace meetings and discussions
	Apply professional ethics at work		
Operate in a team environment SEIP-CON-DFA-02-G	Identify team goals and work processes	Identify own role and responsibilities within team	Communicate and co-operate with team members
	Perform problem solving within the team		
Carry out measurements and calculations SEIP-CON-DFA-03-G	Plan and prepare	Obtain measurements	Perform calculations

## Sector-specific (Common) Competencies

Apply occupational health and safety (OHS) practice in the workplace SEIP-CON-DFA-01-S	Identify OHS policies and procedures	Apply personal health and safety practices	Report hazards and risks
	Respond to emergencies		
Read and interpret sketches and drawings SEIP-CON-DFA-02-S	Interpret information and specifications	Read and interpret sketches and drawings	
Use hand and power tools SEIP-CON-DFA-03-S	Identify and inspect hand and power tools	Use hand tools properly and safely	Operate power tools properly and safely
	Clean and maintain hand and power tools		

## Occupation-specific (Core) Competencies

Plan and prepare for duct fitting SEIP-CON-DFA-01-O	Prepare for works	Identify system requirements	
Perform access cutting and encroachment work SEIP-CON-DFA-02-O	Inspect encroachment area	Collect tools, equipment and materials	Cut out access cutting
	Clean and maintain work area		
Prepare ducting materials SEIP-CON-DFA-03-O	Collect tools, equipment and materials	Prepare ducting materials for installation	
Install ducting SEIP-CON-DFA-04-O	Collect tools, equipment and materials	Install ducting	Clean and maintain work area
Perform leak testing SEIP-CON-DFA-05-O	Prepare for leak testing	Collect tools, equipment and materials	Test ducting system
	Clean and maintain work area		
Erect and dismantle scaffolding SEIP-CON-DFA-06-O	Collect tools, equipment and materials	Erect scaffolding	Dismantle scaffolding
	Clean and maintain work area		

## Units and Elements Table

### Generic – Compulsory (3 units of competency required)

Code	Unit of Competency	Elements of Competency	Duration (hours)
SEIP-CON-DFA-01-G	Carry out workplace interaction	<ol style="list-style-type: none"> <li>1. Interpret workplace communication and etiquette.</li> <li>2. Read and understand workplace documents.</li> <li>3. Participate in workplace meetings and discussions.</li> <li>4. Apply professional ethics at work.</li> </ol>	14
SEIP-CON-DFA-02-G	Operate in a team environment	<ol style="list-style-type: none"> <li>1. Identify team goals and work processes.</li> <li>2. Identify own role and responsibilities within team.</li> <li>3. Communicate and co-operate with team members.</li> <li>4. Perform problem solving within the team.</li> </ol>	14
SEIP-CON-DFA-03-G	Carry out calculations and measurements	<ol style="list-style-type: none"> <li>1. Plan and prepare.</li> <li>2. Obtain measurements.</li> <li>3. Perform calculations.</li> </ol>	16
<b>Total Hours</b>			<b>44</b>

### Sector-specific – Compulsory (3 units of competency required)

Code	Unit of Competency	Elements of Competency	Duration (hours)
SEIP-CON-DFA-01-S	Apply occupational health and safety (OHS) practice in the workplace	<ol style="list-style-type: none"> <li>1. Identify OHS policies and procedures.</li> <li>2. Apply personal health and safety Practices.</li> <li>3. Report hazards and risks.</li> <li>4. Respond to emergencies.</li> </ol>	14
SEIP-CON-DFA-02-S	Read and interpret sketches and drawings	<ol style="list-style-type: none"> <li>1. Interpret information and specifications.</li> <li>2. Read and interpret sketches and drawings.</li> </ol>	10
SEIP-CON-DFA-03-S	Use hand and power tools	<ol style="list-style-type: none"> <li>1. Identify and inspect hand and power tools.</li> <li>2. Use hand tools properly and safely.</li> <li>3. Operate power tools properly and safely.</li> <li>4. Clean and maintain hand and power tools.</li> </ol>	12
<b>Total Hours</b>			<b>36</b>

### Occupation-specific – Compulsory (6 units of competency required)

Code	Unit of Competency	Elements of Competency	Duration (hours)
SEIP-CON-DFA-01-O	Plan and prepare for duct fitting	<ol style="list-style-type: none"> <li>1. Prepare for work.</li> <li>2. Identify system requirements.</li> </ol>	30
SEIP-CON-DFA-02-O	Perform access cutting and encroachment work	<ol style="list-style-type: none"> <li>1. Inspect encroachment area.</li> <li>2. Collect tools, equipment and materials.</li> <li>3. Carry out access cutting.</li> <li>4. Clean and maintain work area.</li> </ol>	30
SEIP-CON-DFA-03-O	Prepare ducting materials	<ol style="list-style-type: none"> <li>1. Collect tools, equipment and materials.</li> <li>2. Prepare ducting materials for installation.</li> </ol>	40
SEIP-CON-DFA-04-O	Install ducting	<ol style="list-style-type: none"> <li>1. Collect tools, equipment and materials.</li> <li>2. Install ducting.</li> <li>3. Clean and maintain work area.</li> </ol>	100
SEIP-CON-DFA-05-O	Perform leak testing	<ol style="list-style-type: none"> <li>1. Prepare for leak testing.</li> <li>2. Collect tools, equipment and materials.</li> <li>3. Test ducting system.</li> <li>4. Clean and maintain work area.</li> </ol>	50
SEIP-CON-DFA-06-O	Erect and dismantle scaffolding	<ol style="list-style-type: none"> <li>1. Collect tools, equipment and materials.</li> <li>2. Erect scaffolding.</li> <li>3. Dismantle scaffolding.</li> <li>4. Clean and maintain work area.</li> </ol>	30
<b>Total Hours</b>			<b>280</b>



## Generic Competencies

<b>Unit Title:</b>	Carry out workplace interaction
<b>Unit Code:</b>	SEIP-CON-DFA-01-G
<b>Nominal Hours:</b>	14 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to carry out workplace interaction. It specifically includes workplace communication, etiquette, understanding workplace documents, workplace meetings and discussions, and professional ethics at work.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Interpret workplace communication and etiquette	<p>1.1. Workplace codes of conduct are interpreted as per organisational guidelines.</p> <p>1.2. Appropriate lines of communication are maintained with supervisors and colleagues.</p> <p>1.3. Workplace interactions are conducted in a <b><u>courteous manner</u></b> to gather and convey information.</p> <p>1.4. <b><u>Workplace procedures and matters</u></b> are comprehended.</p>
2. Read and understand workplace documents	<p>2.1. Workplace documents are interpreted correctly.</p> <p>2.2. Visual information/symbols/signage are understood correctly and followed.</p> <p>2.3. Specific and relevant information are accessed from <b><u>appropriate sources</u></b>.</p> <p>2.4. Appropriate medium is used to transfer information and ideas.</p>
3. Participate in workplace meetings and discussions	<p>3.1. Team meetings are attended on time.</p> <p>3.2. Meeting procedures and etiquette are followed.</p> <p>3.3. Active participation is ensured, opinions are expressed and heard.</p> <p>3.4. Inputs are provided and interpreted in line with the meeting purpose.</p>
4. Practice professional ethics at work	<p>4.1. Responsibilities as a team member are performed.</p> <p>4.2. Tasks are performed in accordance with workplace procedures.</p> <p>4.3. Confidentiality is maintained.</p> <p>4.4. Inappropriate and conflicting situations are avoided.</p>

Range of Variables	
Variable	Range (may include but not limited to)
1. Courteous manner	1.1. Effective questioning 1.2. Active listening 1.3. Speaking skills 1.4. Writing skill 1.5. Email etiquette
2. Workplace procedures and matters	2.1. Notes 2.2. Arranging a meeting 2.3. Agenda 2.4. Simple reports such as progress and incident reports 2.5. Job sheets 2.6. Operational manuals 2.7. Brochures and promotional material 2.8. Visual and graphic materials 2.9. Standards 2.10. OHS information 2.11. Signs
3. Appropriate sources	3.1. Human Resources (HR) Department 3.2. Managers 3.3. Supervisors 3.4. Management Information System (MIS)

Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment must evidence that the candidate: <ol style="list-style-type: none"> <li>1.1. Interpreted workplace communication and etiquette</li> <li>1.2. Interpreted workplace instructions and symbols</li> <li>1.3. Performed active participation in workplace meetings</li> </ol>
2. Underpinning knowledge	<ol style="list-style-type: none"> <li>2.1. Workplace communication and etiquette</li> <li>2.2. Workplace documents, signs and symbols</li> <li>2.3. Meeting procedure and etiquette</li> <li>2.4. Professional ethics</li> </ol>
3. Underpinning skills	<ol style="list-style-type: none"> <li>3.1. Demonstrating workplace communication and etiquette</li> <li>3.2. Interpreting workplace instructions and symbols</li> <li>3.3. Demonstrating active participation in workplace meeting</li> <li>3.4. Applying professional ethics at work</li> </ol>

### Evidence Guide

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

#### 4. Underpinning attitudes

- 4.1. Prompt in carrying out activities
- 4.2. Tidy and punctual
- 4.3. Respectful of peers, subordinates and seniors in the workplace
- 4.4. Concerned about the work environment
- 4.5. Sincere and honest concerning duties

#### 5. Resource implications

- The following resources must be provided:
- 5.1. Workplace (simulated or actual)
  - 5.2. Workplace procedures
  - 5.3. Standard operating procedure
  - 5.4. Workplace documents, signs and symbols
  - 5.5. Codes of conduct
  - 5.6. Projector
  - 5.7. Stationary
  - 5.8. Learning manual

#### 6. Methods of assessment

- Methods of assessment may include but is not limited to:
- 6.1. Written test
  - 6.2. Demonstration
  - 6.3. Oral test
  - 6.4. Observation
  - 6.5. Portfolio

#### 7. Context of assessment

- 7.1. Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.
- 7.2. Assessment must be done by a suitably qualified/certified assessor.

### Accreditation Requirements

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any NTVQF qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.

<b>Unit Title:</b>	Operate in a team environment
<b>Unit Code:</b>	SEIP-CON-DFA-02-G
<b>Nominal Hours:</b>	14 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to operate in a team environment. It specifically includes team goals and work processes, roles and responsibilities, team communication and problem solving within the team.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Identify team goals and work processes	<p>1.1. Roles and objectives of the team are identified and interpreted.</p> <p>1.2. Roles and responsibilities of team members are identified and interpreted.</p>
2. Identify own role and responsibilities within team	<p>2.1. Personal role and responsibilities are identified within the team environment.</p> <p>2.2. Reporting relationships are interpreted within team and external to team.</p>
3. Communicate and co-operate with team members	<p>3.1. Other teammates' tasks are identified and support provided when requested.</p> <p>3.2. The team is encouraged through <b><u>sharing information</u></b> or expertise, working together to solve problems, and putting team success first.</p> <p>3.3. Views and opinions of other team members are interpreted and respected.</p>
4. Practice problem solving within the team	<p>4.1. Problems faced at the individual and team level are identified and showed insight into the root-causes of the problems.</p> <p>4.2. A range of solutions and courses of action are identified together with benefits, costs, and risks associated with each.</p> <p>4.3. The good ideas of others to help develop solutions are recognised and advice sought from those who have solved similar problems.</p> <p>4.4. It is looked beyond the obvious and not stopped at the first answers.</p>

Range of Variables	
Variable	Range ( <i>may include but not limited to</i> )
1. Sharing information	1.1. Agenda 1.2. Minutes 1.3. Progress and incident reports 1.4. Operational manuals 1.5. Visual and graphic materials 1.6. Emails and SMS 1.7. Phone directory 1.8. Policy, procedure and standards 1.9. OHS information

Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Underpinning knowledge	1.1. Team goals and work processes 1.2. Roles and responsibilities 1.3. Finding problems and solving them
2. Underpinning skills	2.1. Identifying own role and responsibilities within team 2.2. Communicating and co-operating with team members 2.3. Demonstrating problem solving within the team
3. Underpinning attitudes	3.1. Active on teamwork 3.2. Prompt in carrying out activities 3.3. Tidy and punctual 3.4. Respectful of peers, subordinates and seniors in the workplace 3.5. Sincere and honest concerning duties
4. Underpinning knowledge	4.1. Team goals and work processes 4.2. Roles and responsibilities 4.3. Finding problems and solving them
5. Resource implications	The following resources must be provided: 5.1. Workplace (simulated or actual) 5.2. Projector 5.3. Stationary 5.4. Learning manual

### Evidence Guide

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

#### 6. Methods of assessment

Methods of assessment may include but is not limited to:

- 6.1. Written test
- 6.2. Demonstration
- 6.3. Oral test
- 6.4. Observation
- 6.5. Portfolio

#### 7. Context of assessment

- 7.1. Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.
- 7.2. Assessment must be done by a suitably qualified/certified assessor.

### Accreditation Requirements

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any NTVQF qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.

<b>Unit Title:</b>	Carry out measurements and calculations
<b>Unit Code:</b>	SEIP-CON-DFA-03-G
<b>Nominal Hours:</b>	16 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required for carry out measurements and calculations in the workplace. It specifically includes planning and preparing to take measurements, obtaining measurements, and performing calculations.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Plan and prepare	<p>1.1. Work instructions are confirmed and applied to the job in hand.</p> <p>1.2. Materials to be measured are identified as per job specification.</p> <p>1.3. Appropriate <b><u>measuring device</u></b> is identified and selected based on materials to be measured.</p> <p>1.4. Specifications are obtained and verified from relevant <b><u>documents</u></b>.</p>
2. Obtain measurements	<p>2.1. Method of obtaining measurement is selected and applied.</p> <p>2.2. <b><u>Measurements</u></b> are obtained using appropriate device in accordance with job requirement.</p> <p>2.3. Measurements, including areas and volume, are confirmed and applied.</p>
3. Perform calculations	<p>3.1. <b><u>Calculations</u></b>, using basic operations, for determining material requirement are taken.</p> <p>3.2. Appropriate <b><u>formulas</u></b> for calculating quantities are selected.</p> <p>3.3. Quantities are estimated from the calculations taken.</p> <p>3.4. Material quantities are calculated, confirmed and recorded within tolerances.</p>

Range of Variables	
Variable	Range ( <i>may include but not limited to</i> )
1. Measuring device	<p>1.1. Measuring tape</p> <p>1.2. Steel rule</p> <p>1.3. Calculator</p> <p>1.4. Sets square</p>

Range of Variables	
Variable	Range ( <i>may include but not limited to</i> )
2. Documents	2.1. Technical manuals 2.2. Specifications 2.3. Sketches 2.4. Drawings 2.5. Charts 2.6. Photographs
3. Measurements	3.1. Length 3.2. Width 3.3. Weight 3.4. Tolerance
4. Calculations	4.1. Addition 4.2. Subtraction 4.3. Multiplication 4.4. Division 4.5. Area 4.6. Volume 4.7. Circumference 4.8. CBM 4.9. Volumetric weight
5. Formulas	5.1. Fractions 5.2. Percentages 5.3. Mixed numbers 5.4. Conversions 5.5. Scales

Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment required evidence that the candidate: <ol style="list-style-type: none"> <li>1.1. Identified and selected appropriate measuring devices</li> <li>1.2. Carried out measurements for apparel</li> <li>1.3. Identified and selected correct mathematical formula</li> <li>1.4. Performed calculations as per job requirement</li> </ol>



## Evidence Guide

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

2. Underpinning knowledge	<ul style="list-style-type: none"><li>2.1. Measuring devices</li><li>2.2. Basic mathematical formulas</li><li>2.3. Simple calculation techniques</li><li>2.4. Garment allowances and tolerances</li><li>2.5. Recording data procedures</li></ul>
3. Underpinning skills	<ul style="list-style-type: none"><li>3.1. Identifying appropriate measuring devices</li><li>3.2. Carrying out measurements for apparel</li><li>3.3. Performing calculations as per job requirement</li></ul>
4. Underpinning attitudes	<ul style="list-style-type: none"><li>4.1. Committed to occupational health and safety practices</li><li>4.2. Communicates well with peers, subordinates and seniors in workplace</li><li>4.3. Prompt in carrying out activities</li><li>4.4. Tidy and punctual</li><li>4.5. Sincere and honest concerning duties</li></ul>
5. Resource implications	<p>The following resources must be provided:</p> <ul style="list-style-type: none"><li>5.1. Workplace (simulated or actual)</li><li>5.2. Computer/laptop/notebook</li><li>5.3. Calculator</li><li>5.4. Measuring tape</li><li>5.5. Projector</li><li>5.6. Stationary</li><li>5.7. Learning manual</li></ul>
6. Methods of assessment	<p>Methods of assessment may include but is not limited to:</p> <ul style="list-style-type: none"><li>6.1. Written test</li><li>6.2. Oral test</li><li>6.3. Observation</li><li>6.4. Demonstration</li><li>6.5. Portfolio</li></ul>
7. Context of assessment	<ul style="list-style-type: none"><li>7.1. Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.</li><li>7.2. Assessment must be done by a suitably qualified/certified assessor.</li></ul>

## Accreditation Requirements

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## Sector-specific Competencies

<b>Unit Title:</b>	Apply occupational health and safety (OHS) practice in the workplace
<b>Unit Code:</b>	SEIP-CON-DFA-01-S
<b>Nominal Hours:</b>	14 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to apply occupational health and safety (OHS) practice in the workplace. It specifically includes identifying OHS policies and procedures, applying personal health and safety practices, reporting hazards and risks, and responding to emergencies.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Identify OHS policies and procedures	<p>1.1. <b><u>OHS policies</u></b> and safe operating procedures are interpreted.</p> <p>1.2. Safety signs and symbols are identified and followed.</p> <p>1.3. Response, evacuation procedures and other contingency measures are interpreted correctly.</p>
2. Apply personal health and safety practices	<p>2.1. OHS policies and procedures are applied in the workplace including <b><u>personal protective equipment (PPE)</u></b>.</p> <p>2.2. Common health issues are recognised.</p> <p>2.3. Common safety issues are identified.</p>
3. Report hazards and risks	<p>3.1. Hazards and risks are identified.</p> <p>3.2. Hazards and risks assessment and controls are interpreted.</p>
4. Respond to emergencies	<p>4.1. Respond to alarms and warning devices.</p> <p>4.2. <b><u>Emergency response plans and procedures</u></b> are responded to.</p> <p>4.3. <b><u>First aid procedures</u></b> during emergency situations are identified.</p>

Range of Variables	
Variable	Range ( <i>may include but not limited to</i> )
1. OHS policies	<p>1.1. Organisational OHS policies</p> <p>1.2. International OHS requirements</p> <p>1.3. Fire safety rules and regulations</p>
2. Emergency response plans and procedures	<p>2.1. Firefighting procedures</p> <p>2.2. Earthquake response procedures</p> <p>2.3. Emergency response plans and procedures</p> <p>2.4. Medical and first aid</p>

Range of Variables	
Variable	Range ( <i>may include but not limited to</i> )
3. First aid procedure	3.1. Washing of open wound 3.2. Washing chemically infected area 3.3. Applying bandage 3.4. Taking appropriate medicine
4. Personal protective equipment	4.1. Safety glasses 4.2. Ear plugs 4.3. Gloves 4.4. Apron 4.5. Helmet 4.6. Mask 4.7. Safety shoes

Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment must evidence that the candidate: <ol style="list-style-type: none"> <li>1.1. Identified OHS policies and procedures</li> <li>1.2. Applied personal health and safety practices (including PPE)</li> <li>1.3. Reported hazards and risks</li> <li>1.4. Responded to emergencies</li> </ol>
2. Underpinning knowledge	<ol style="list-style-type: none"> <li>2.1. Workplace OHS policies and procedures</li> <li>2.2. Work safety procedures</li> <li>2.3. Emergency response procedures:               <ol style="list-style-type: none"> <li>2.3.1. Firefighting</li> <li>2.3.2. Earthquake response</li> <li>2.3.3. Accident response</li> </ol> </li> <li>2.4. Types of hazards (biological, chemical and physical) and their effects</li> <li>2.5. OHS awareness</li> <li>2.6. Personal protective equipment (PPE)</li> </ol>
3. Underpinning skills	<ol style="list-style-type: none"> <li>3.1. Identifying OHS policies and procedures</li> <li>3.2. Applying personal health and safety practices</li> <li>3.3. Reporting hazards and risks</li> <li>3.4. Responding to emergencies</li> </ol>

## Evidence Guide

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

4. Underpinning attitudes	<ul style="list-style-type: none"><li>4.1. Committed to occupational health and safety practices</li><li>4.2. Communicates well with peers, subordinates and seniors in workplace</li><li>4.3. Prompt in carrying out activities</li><li>4.4. Tidy and punctual</li><li>4.5. Sincere and honest concerning duties</li><li>4.6. Responsible during emergencies</li></ul>
5. Resource implications	<p>The following resources must be provided:</p> <ul style="list-style-type: none"><li>5.1. Workplace (simulated or actual)</li><li>5.2. Personal protective equipment (PPE)</li><li>5.3. Firefighting equipment</li><li>5.4. Emergency response manual</li><li>5.5. First aid kits</li><li>5.6. Stationary</li><li>5.7. Learning manual</li></ul>
6. Methods of assessment	<p>Methods of assessment may include but is not limited to:</p> <ul style="list-style-type: none"><li>6.1. Written test</li><li>6.2. Demonstration</li><li>6.3. Oral test</li><li>6.4. Observation</li><li>6.5. Portfolio</li></ul>
7. Context of assessment	<ul style="list-style-type: none"><li>7.1. Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.</li><li>7.2. Assessment must be done by a suitably qualified/certified assessor.</li></ul>

## Accreditation Requirements

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<b>Unit Title:</b>	Read and interpret sketches and drawings
<b>Unit Code:</b>	SEIP-CON-DFA-02-S
<b>Nominal Hours:</b>	10 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to read and interpret sketches and drawings. It specifically includes interpreting information and specifications, and reading and interpreting sketches and drawings.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Interpret information and specifications	<p>1.1. Appropriate <b><u>manuals</u></b> for work activity are identified and collected.</p> <p>1.2. Information and <b><u>specifications</u></b> in the manuals are interpreted and applied.</p>
2. Read and interpret sketches and drawings	<p>2.1. Relevant <b><u>sketches and drawings</u></b> are identified for job requirement.</p> <p>2.2. Key <b><u>terms and abbreviations</u></b> are identified and interpreted.</p> <p>2.3. <b><u>Signs and symbols</u></b> are identified and interpreted.</p> <p>2.4. Schedules, dimensions, sketches, drawings and specifications are correctly read and interpreted.</p>

Range of Variables	
Variable	Range ( <i>may include but not limited to</i> )
1. Manuals	<p>1.1. Buyers specification</p> <p>1.2. Compliance</p> <p>1.3. Maintenance procedure</p> <p>1.4. Periodic maintenance</p> <p>1.5. Quality assurance</p> <p>1.6. Standard operating procedure (SOP)</p>
2. Sketches and drawings	<p>2.1. Technical</p> <p>2.2. Measurement</p> <p>2.3. Design</p>
3. Specifications	<p>3.1. Product</p> <p>3.2. Performance</p> <p>3.3. Method</p>
4. Terms and abbreviations	4.1. Refers to all terms and abbreviations associated with the Construction Sector
5. Signs and symbols	5.1. Includes all signs and symbols associated with the Construction Sector

## Evidence Guide

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

<b>1. Critical aspects of competency</b>	Assessment must evidence that the candidate: <b>1.1.</b> Identified information and specifications <b>1.2.</b> Read and interpreted sketches and drawings
<b>2. Underpinning knowledge</b>	<b>2.1.</b> Manuals <b>2.2.</b> Units of measurement <b>2.3.</b> Units of conversion <b>2.4.</b> Sketch, drawings and specifications
<b>3. Underpinning skills</b>	<b>3.1.</b> Reading and identifying information and specifications (from manual) <b>3.2.</b> Reading and interpreting sketches and drawings
<b>4. Underpinning attitudes</b>	<b>4.1.</b> Prompt in carrying out activities <b>4.2.</b> Tidy and punctual <b>4.3.</b> Eager to learn <b>4.4.</b> Active on teamwork <b>4.5.</b> Sincere and honest concerning duties <b>4.6.</b> Eager to learn <b>4.7.</b> Concerned about proper use of computer and peripherals
<b>5. Resource implications</b>	The following resources must be provided: <b>5.1.</b> Workplace (simulated or actual) <b>5.2.</b> Computer/laptop/notebook <b>5.3.</b> Software <b>5.4.</b> Sketches and drawings <b>5.5.</b> Manuals and specifications <b>5.6.</b> Projector <b>5.7.</b> Stationary <b>5.8.</b> Learning manual
<b>6. Methods of assessment</b>	Methods of assessment may include but is not limited to: <b>6.1.</b> Written test <b>6.2.</b> Oral test <b>6.3.</b> Observation <b>6.4.</b> Demonstration <b>6.5.</b> Portfolio
<b>7. Context of assessment</b>	<b>7.1.</b> Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency. <b>7.2.</b> Assessment must be done by a suitably qualified/certified assessor.

**Evidence Guide**

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

**Accreditation Requirements**

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<b>Unit Title:</b>	Use hand and power tools
<b>Unit Code:</b>	SEIP-CON-DFA-03-S
<b>Nominal Hours:</b>	12 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to use hand and power tools in the workplace. It specifically includes identifying and inspecting hand and power tools for usability, using and operating tools properly and safely, and cleaning and maintaining hand and power tools after use.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Identify and inspect hand and power tools	<p>1.1. Appropriate hand and power tools are identified.</p> <p>1.2. Application of hand and power tools is recognised.</p> <p>1.3. Usability of hand and power tools is checked and verified.</p>
2. Use hand tools properly and safely	<p>2.1. Appropriate <b><u>hand tools</u></b> are selected.</p> <p>2.2. Safety precautions are ensured before using hand tools.</p> <p>2.3. Unsafe or faulty hand tools are identified and marked for repair.</p> <p>2.4. <b><u>Measuring tools</u></b> are checked and calibrated before use.</p> <p>2.5. Use hand tools properly and safely to perform work activity.</p>
3. Operate power tools properly and safely	<p>3.1. Appropriate <b><u>power tools</u></b> are selected.</p> <p>3.2. Power supply outlet and electrical cord are inspected and confirmed safe for use in accordance with established workplace safety requirements.</p> <p>3.3. Safety precautions are ensured before using power tools in accordance with manufacturer's operating specification.</p> <p>3.4. Proper sequence of operation applied for using power tools.</p> <p>3.5. Unsafe or faulty power tools are identified and marked for repair.</p> <p>3.6. Operate power tools properly and safely to perform work activity.</p>
4. Clean and maintain hand and power tools	<p>4.1. Dust and foreign matter is removed from hand and power tools in accordance to workplace standards.</p> <p>4.2. Condition of hand and power tools is checked after use and reported.</p> <p>4.3. Appropriate lubricant is applied after use and prior to storage.</p> <p>4.4. Measuring tools are checked and calibrated after use.</p> <p>4.5. Defective hand and power tools are inspected and repaired or replaced.</p> <p>4.6. Hand and power tools are stored and secured in accordance with workplace requirements.</p>



Range of Variables	
Variable	Range ( <i>may include but not limited to</i> )
1. Hand tools	<ul style="list-style-type: none"> <li>1.1. Hacksaw</li> <li>1.2. Hammer</li> <li>1.3. Files</li> <li>1.4. Pliers</li> <li>1.5. Punches</li> <li>1.6. Screwdrivers</li> <li>1.7. Wrench box</li> <li>1.8. Hand tap</li> <li>1.9. Wire cutters</li> <li>1.10. Hand hacksaw</li> <li>1.11. Drill</li> <li>1.12. Grinder</li> <li>1.13. Dial gauge</li> <li>1.14. Spanner comb</li> <li>1.15. Spanner ring</li> <li>1.16. Socket ratchet set</li> <li>1.17. Easy opener</li> <li>1.18. Top roller adjust gauge</li> <li>1.19. Allen key</li> <li>1.20. Top roller adjust gauge</li> </ul>
2. Power tools	<ul style="list-style-type: none"> <li>2.1. Portable drilling machine</li> <li>2.2. Threading machine</li> <li>2.3. Saws</li> <li>2.4. Glue gun</li> <li>2.5. Soldering iron</li> <li>2.6. Grinders</li> </ul>
3. Measuring tools	<ul style="list-style-type: none"> <li>3.1. Measuring tape</li> <li>3.2. Steel tape</li> <li>3.3. Techo Meter</li> <li>3.4. Slide callipers</li> </ul>

**Evidence Guide**

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

<b>1. Critical aspects of competency</b>	Assessment must evidence that the candidate: <b>1.1.</b> Identified and selected appropriate hand and power tools for work to be performed <b>1.2.</b> Identified and used measuring and testing tools appropriate to work activity <b>1.3.</b> Followed safety precautions when using hand and power tools <b>1.4.</b> Operated power tools safely and pursuant to manufacturer's operating specification <b>1.5.</b> Performed cleaning and maintenance of hand and power tools after use and prior to storing
<b>2. Underpinning knowledge</b>	<b>2.1.</b> Information on types of hand and power tools, their functions and use <b>2.2.</b> Procedures for safely using hand and power tools
<b>3. Underpinning skills</b>	<b>3.1.</b> Identifying hand, power and measuring tools <b>3.2.</b> Following safety precautions when using hand, power and measuring tools <b>3.3.</b> Using hand and measuring tools correctly and safely in accordance with manufacturer's operating specification <b>3.4.</b> Operating power tools correctly and safely in accordance with manufacturer's operating specification <b>3.5.</b> Cleaning and maintaining hand and power tools after use <b>3.6.</b> Applying appropriate lubricant on hand and power tools after use and prior to storing
<b>4. Underpinning attitudes</b>	<b>4.1.</b> Commitment to occupational health and safety <b>4.2.</b> Promptness in carrying out activities <b>4.3.</b> Sincere and honest to duties <b>4.4.</b> Environmental concerns <b>4.5.</b> Tidiness and timeliness <b>4.6.</b> Concerned for proper use of tools
<b>5. Resource implications</b>	The following resources must be provided: <b>5.1.</b> Workplace (simulated or actual) <b>5.2.</b> Hand tools <b>5.3.</b> Power tools <b>5.4.</b> Measuring tools <b>5.5.</b> Projector <b>5.6.</b> Stationary <b>5.7.</b> Learning manual

**Evidence Guide**

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

**6. Methods of assessment**

Methods of assessment may include but is not limited to:

- 6.1. Written test
- 6.2. Oral test
- 6.3. Observation
- 6.4. Demonstration
- 6.5. Portfolio

**7. Context of assessment**

- 7.1. Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.
- 7.2. Assessment must be done by a suitably qualified/certified assessor.

**Accreditation Requirements**

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## Occupation-specific Competencies

<b>Unit Title:</b>	Plan and prepare for duct fitting
<b>Unit Code:</b>	SEIP-CON-DFA-01-O
<b>Nominal Hours:</b>	30 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to plan and prepare for duct fitting. It specifically includes preparing for work and identifying system requirements.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Prepare for work	<p>1.1. Work requirements are identified and correctly interpreted ensuring <b><u>quality requirements</u></b> are met.</p> <p>1.2. Job instructions are read and clarified where needed.</p> <p>1.3. Work tasks are planned and sequenced to ensure safety.</p> <p>1.4. Work area is inspected and prepared as per job requirement.</p> <p>1.5. Appropriate personal protective equipment (PPE) is identified and selected.</p> <p>1.6. <b><u>Tools and equipment</u></b> are identified checked for serviceability and selected.</p>
2. Identify system requirements	<p>2.1. Ducting system requirements are identified as per job specification.</p> <p>2.2. Type and quantity of <b><u>ducting system components</u></b> are identified and selected.</p> <p>2.3. Allowances for fabrication and assembly are calculated and determined.</p> <p>2.4. <b><u>Materials</u></b> are identified, ordered and collected as per procurement process.</p> <p>2.5. Components and materials are checked for compliance and quality as per standard operating procedure.</p> <p>2.6. Faulty, damaged or unacceptable components and materials are recorded and returned.</p>

Range of Variables	
Variable	Range ( <i>may include but not limited to</i> )
1. Quality requirements	<p>1.1. Local standards</p> <p>1.2. Company quality policy</p> <p>1.3. Manufacturer standards</p> <p>1.4. International standards</p> <p>1.5. Standard operating procedure</p>

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range (may include but not limited to)</b>
2. Tools and equipment	<ul style="list-style-type: none"> <li>2.1. Duct fitter</li> <li>2.2. Fire dampers</li> <li>2.3. Noise attenuation fittings</li> <li>2.4. Volume control dampers</li> <li>2.5. Ladders</li> <li>2.6. Chain blocks</li> <li>2.7. Trolley</li> <li>2.8. Rollers</li> <li>2.9. Scaffolding</li> <li>2.10. Measuring equipment</li> <li>2.11. Sheet metal rollers</li> <li>2.12. Welding machinery</li> <li>2.13. Manometers</li> <li>2.14. Lifting equipment</li> <li>2.15. Elevated work platform</li> </ul>
3. Ducting system components	<ul style="list-style-type: none"> <li>3.1. Diffusers</li> <li>3.2. Ducting</li> <li>3.3. Fixings and supports</li> <li>3.4. Insulation</li> <li>3.5. Joints</li> <li>3.6. Plenum box and chamber</li> <li>3.7. Terminal devices</li> <li>3.8. Sheet metal (flexible and combination)</li> </ul>
4. Materials	<ul style="list-style-type: none"> <li>4.1. Acoustic and non-acoustic materials</li> <li>4.2. Fiberglass tissue</li> <li>4.3. Aluminium laminate fabric</li> <li>4.4. Perforated double-sided aluminium foil</li> <li>4.5. Perforated zinc anneals</li> <li>4.6. Resin-bonded mineral wool</li> <li>4.7. PVC</li> <li>4.8. Thermal insulation</li> </ul>

## Evidence Guide

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

<b>1. Critical aspects of competency</b>	Assessment must evidence that the candidate: <b>1.1.</b> Prepared for work <b>1.2.</b> Identified quality requirements <b>1.3.</b> Sequenced work tasks safely <b>1.4.</b> Selected and checked tools and equipment <b>1.5.</b> Identified ducting system requirements <b>1.6.</b> Calculated type and quantity of ducting system components <b>1.7.</b> Identified and ordered necessary materials <b>1.8.</b> Checked components and materials for compliance and quality
<b>2. Underpinning knowledge</b>	<b>2.1.</b> Work planning and preparation <b>2.2.</b> Quality requirements <b>2.3.</b> Personal protective equipment (PPE) <b>2.4.</b> Tools and equipment <b>2.5.</b> Ducting systems <b>2.6.</b> Ducting components and materials
<b>3. Underpinning skills</b>	<b>3.1.</b> Planning and preparing for work <b>3.2.</b> Identifying and interpreting quality requirements <b>3.3.</b> Sequencing work safely <b>3.4.</b> Checking selected tools and equipment <b>3.5.</b> Identifying ducting system requirements <b>3.6.</b> Calculating type and quantity of ducting system components <b>3.7.</b> Identifying and ordering ducting materials <b>3.8.</b> Checking components and materials for compliance and quality
<b>4. Underpinning attitudes</b>	<b>4.1.</b> Tidy and punctual <b>4.2.</b> Prompt in carrying out activities <b>4.3.</b> Sincere and honest concerning duties <b>4.4.</b> Active on teamwork <b>4.5.</b> Eager to learn <b>4.6.</b> Concerned for proper use of tools <b>4.7.</b> Committed to occupational health and safety practices <b>4.8.</b> Respectful of peers, subordinates and seniors in the workplace <b>4.9.</b> Communicate with peers and seniors in the workplace

### Evidence Guide

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

#### 5. Resource implications

The following resources must be provided:

- 5.1. Workplace (simulated or actual)
- 5.2. Personal protective equipment (PPE)
- 5.3. Tools and equipment
- 5.4. Job specifications
- 5.5. Manuals
- 5.6. Projector
- 5.7. Stationary
- 5.8. Learning manual

#### 6. Methods of assessment

Methods of assessment may include but is not limited to:

- 6.1. Written test
- 6.2. Oral test
- 6.3. Observation
- 6.4. Demonstration
- 6.5. Portfolio

#### 7. Context of assessment

- 7.1. Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.
- 7.2. Assessment must be done by a suitably qualified/certified assessor.

### Accreditation Requirements

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<b>Unit Title:</b>	Perform access cutting and encroachment work
<b>Unit Code:</b>	SEIP-CON-DFA-02-O
<b>Nominal Hours:</b>	30 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to perform access cutting and encroachment work. It specifically includes inspecting encroachment area, collecting tools, equipment and materials, carrying out access cutting, and cleaning and maintaining work area.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Inspect encroachment area	<p>1.1. Building drawings and duct fitting plan are identified and interpreted.</p> <p>1.2. <b><u>Lines of encroachment</u></b> are identified, inspected and clearly marked.</p> <p>1.3. Possible <b><u>obstructions and limitations</u></b> along line of encroachment are identified and work adjusted accordingly.</p>
2. Collect tools, equipment and materials	<p>2.1. <b><u>Tools and equipment</u></b> are identified, collected and checked for serviceability as per job requirement.</p> <p>2.2. Appropriate personal protective equipment (PPE) as per job requirement is collected.</p> <p>2.3. <b><u>Materials</u></b> are identified, ordered and collected as per job requirement.</p>
3. Carry out access cutting	<p>3.1. Layout for access and encroachment work is completed.</p> <p>3.2. Concrete wall and floor are cut to create pipe/conduit access in accordance with plans and specifications.</p> <p>3.3. Completed work is inspected and checked to ensure quality and compliance with job specifications.</p>
4. Clean and maintain work area	<p>4.1. Tools and equipment are cleaned, maintained and stored.</p> <p>4.2. Work area is cleaned and maintained, and waste materials disposed of.</p> <p>4.3. Defective or faulty tools and equipment is recorded and reported.</p>

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> ( <i>may include but not limited to</i> )
1. Lines of encroachment	<p>1.1. Floors</p> <p>1.2. Walls</p> <p>1.3. Ceilings</p> <p>1.4. Beams</p> <p>1.5. Columns</p> <p>1.6. Slabs</p>



<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> <i>(may include but not limited to)</i>
2. Obstructions and limitations	<ul style="list-style-type: none"> <li>2.1. Appliances</li> <li>2.2. Cabinets</li> <li>2.3. Columns</li> <li>2.4. Beams</li> <li>2.5. Piping</li> <li>2.6. Doors</li> <li>2.7. Windows</li> </ul>
3. Tools and equipment	<ul style="list-style-type: none"> <li>3.1. Tools: <ul style="list-style-type: none"> <li>3.1.1. Measuring tape</li> <li>3.1.2. Steel rule</li> <li>3.1.3. Chisel</li> <li>3.1.4. Hammer</li> <li>3.1.5. Mallet</li> <li>3.1.6. Adjustable wrench</li> <li>3.1.7. Pipe wrench</li> <li>3.1.8. Pliers</li> <li>3.1.9. Handsaw</li> <li>3.1.10. Hacksaw</li> <li>3.1.11. Spirit level</li> </ul> </li> <li>3.2. Equipment: <ul style="list-style-type: none"> <li>3.2.1. Jack hammer</li> <li>3.2.2. Drill press</li> <li>3.2.3. Portable drill</li> <li>3.2.4. Angle grinder</li> <li>3.2.5. Oxy-acetylene cutter</li> <li>3.2.6. Welding machine</li> </ul> </li> </ul>
4. Materials	<ul style="list-style-type: none"> <li>4.1. Soft stone marker</li> <li>4.2. Marking pen</li> <li>4.3. Pencil</li> <li>4.4. Welding rods</li> <li>4.5. Cement</li> <li>4.6. Sand</li> <li>4.7. Water</li> </ul>

## Evidence Guide

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

<b>1. Critical aspect of competency</b>	Assessment must evidence that the candidate: <b>1.1.</b> Interpreted building drawings and duct fitting plans <b>1.2.</b> Marked out lines of encroachment <b>1.3.</b> Identified obstructions and limitations <b>1.4.</b> Collected tools, equipment and materials <b>1.5.</b> Checked tools and equipment for serviceability <b>1.6.</b> Completed layout for access and encroachment work <b>1.7.</b> Carried out access cutting <b>1.8.</b> Cleaned and maintained work area
<b>2. Underpinning knowledge</b>	<b>2.1.</b> Building drawings <b>2.2.</b> Duct fitting plans <b>2.3.</b> Lines of encroachment <b>2.4.</b> Obstructions and limitations <b>2.5.</b> Tools and equipment <b>2.6.</b> Materials <b>2.7.</b> Personal protective equipment (PPE) <b>2.8.</b> Cutting process <b>2.9.</b> Cleaning and maintenance procedure <b>2.10.</b> Standard operating procedure
<b>3. Underpinning skills</b>	<b>3.1.</b> Interpreting building drawings and duct fitting plans <b>3.2.</b> Marking out lines of encroachment <b>3.3.</b> Checking tools and equipment <b>3.4.</b> Performing layout for access and encroachment work <b>3.5.</b> Carrying out cutting <b>3.6.</b> Cleaning and maintaining work area
<b>4. Underpinning attitudes</b>	<b>4.1.</b> Tidy and punctual <b>4.2.</b> Prompt in carrying out activities <b>4.3.</b> Sincere and honest concerning duties <b>4.4.</b> Active on teamwork <b>4.5.</b> Eager to learn <b>4.6.</b> Concerned for proper use of tools <b>4.7.</b> Committed to occupational health and safety practices <b>4.8.</b> Respectful of peers, subordinates and seniors in the workplace <b>4.9.</b> Communicate with peers and seniors in the workplace

### Evidence Guide

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

#### 5. Resource implications

The following resources must be provided:

- 5.1. Workplace (simulated or actual)
- 5.2. Personal protective equipment (PPE)
- 5.3. Tools and equipment
- 5.4. Materials
- 5.5. Job specifications
- 5.6. Building drawings
- 5.7. Duct fitting plans
- 5.8. Standard operating procedure
- 5.9. Projector
- 5.10. Stationary
- 5.11. Learning manual

#### 6. Methods of assessment

Methods of assessment may include but is not limited to:

- 6.1. Written test
- 6.2. Oral test
- 6.3. Observation
- 6.4. Demonstration
- 6.5. Portfolio

#### 7. Context of assessment

- 7.1. Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.
- 7.2. Assessment must be done by a suitably qualified/certified assessor.

### Accreditation Requirements

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any NTVQF qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.

<b>Unit Title:</b>	Prepare ducting materials
<b>Unit Code:</b>	SEIP-CON-DFA-03-O
<b>Nominal Hours:</b>	40 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to prepare ducting materials. It specifically includes collecting tools, equipment and materials, and preparing ducting materials for installation.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Collect tools, equipment and materials	<p>1.1. <b><u>Tools and equipment</u></b> are identified, collected and checked for serviceability as per job requirement.</p> <p>1.2. Appropriate personal protective equipment (PPE) as per job requirement is collected.</p> <p>1.3. <b><u>Ducting materials</u></b> are identified, ordered and collected as per job requirement.</p>
2. Prepare ducting materials for installation	<p>2.1. Ducting materials are checked and inspected in ensure quality and compliance with job requirement.</p> <p>2.2. Ducting materials are prepared for installation as per standard operating procedure.</p>

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> ( <i>may include but not limited to</i> )
1. Tools and equipment	<p>1.1. Tools:</p> <ul style="list-style-type: none"> <li>1.1.1. Duct lifter</li> <li>1.1.2. Fire dampers</li> <li>1.1.3. Noise attenuation fittings</li> <li>1.1.4. Volume control dampers</li> <li>1.1.5. Ladders</li> <li>1.1.6. Chain blocks</li> <li>1.1.7. Manometers</li> <li>1.1.8. Measuring tape</li> </ul> <p>1.2. Equipment:</p> <ul style="list-style-type: none"> <li>1.2.1. Lifting equipment</li> <li>1.2.2. Elevated work platform</li> <li>1.2.3. Trolleys</li> <li>1.2.4. Rollers</li> <li>1.2.5. Scaffold</li> </ul>

Range of Variables	
Variable	Range (may include but not limited to)
2. Ducting materials	2.1. Acoustic and non-acoustic materials 2.2. Fiberglass tissue 2.3. Aluminium laminate fabric 2.4. Perforated double-sided aluminium foil 2.5. Perforated zinc anneals 2.6. Resin-bonded mineral wool 2.7. PVC 2.8. Thermal insulation 2.9. Sheet metal 2.10. Ducting

Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment must evidence that the candidate: <ol style="list-style-type: none"> <li>1.1. Collected tools, equipment and materials</li> <li>1.2. Checked tools and equipment for serviceability</li> <li>1.3. Inspected ducting materials for quality and compliance</li> <li>1.4. Ducting materials are prepared for installation</li> </ol>
2. Underpinning knowledge	<ol style="list-style-type: none"> <li>2.1. Tools and equipment</li> <li>2.2. Personal protective equipment (PPE)</li> <li>2.3. Ducting materials</li> <li>2.4. Quality and compliance requirements</li> <li>2.5. Installation process</li> <li>2.6. Standard operating procedure</li> </ol>
3. Underpinning skills	<ol style="list-style-type: none"> <li>3.1. Checking tools and equipment</li> <li>3.2. Inspecting ducting materials</li> <li>3.3. Preparing ducting materials</li> </ol>
4. Underpinning attitudes	<ol style="list-style-type: none"> <li>4.1. Tidy and punctual</li> <li>4.2. Prompt in carrying out activities</li> <li>4.3. Sincere and honest concerning duties</li> <li>4.4. Active on teamwork</li> <li>4.5. Eager to learn</li> <li>4.6. Concerned for proper use of tools</li> <li>4.7. Committed to occupational health and safety practices</li> <li>4.8. Respectful of peers, subordinates and seniors in the workplace</li> <li>4.9. Communicate with peers and seniors in the workplace</li> </ol>

**Evidence Guide**

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

**5. Resource implications**

The following resources must be provided:

- 5.1. Workplace (simulated or actual)
- 5.2. Personal protective equipment (PPE)
- 5.3. Tools and equipment
- 5.4. Ducting materials
- 5.5. Job specifications
- 5.6. Standard operating procedure
- 5.7. Projector
- 5.8. Stationary
- 5.9. Learning manual

**6. Methods of assessment**

Methods of assessment may include but is not limited to:

- 6.1. Written test
- 6.2. Oral test
- 6.3. Observation
- 6.4. Demonstration
- 6.5. Portfolio

**7. Context of assessment**

- 7.1. Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.
- 7.2. Assessment must be done by a suitably qualified/certified assessor.

**Accreditation Requirements**

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<b>Unit Title:</b>	Install ducting
<b>Unit Code:</b>	SEIP-CON-DFA-04-O
<b>Nominal Hours:</b>	100 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to install ducting for air-conditioning and ventilation. It specifically includes collecting tools, equipment and materials, installing ducting, and cleaning and maintaining work area.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Collect tools, equipment and materials	<p>1.1. Tools and equipment are identified, collected and checked for serviceability as per job requirement.</p> <p>1.2. Appropriate personal protective equipment (PPE) as per job requirement is collected.</p> <p>1.3. Materials are identified, ordered and collected as per job requirement.</p>
2. Install ducting	<p>2.1. Ducting for air conditioning and ventilation system is set-out as per plans and specifications</p> <p>2.2. Ducting supports and fixings are positioned correctly as per manufacturer specifications.</p> <p>2.3. Ducting is installed as per plans and specifications</p> <p>2.4. Circumferential joints are assembled and sealed.</p> <p>2.5. Insulation materials are fitted and fixed.</p> <p>2.6. <b><u>Diffusers and terminal devices</u></b> are installed.</p> <p>2.7. <b><u>Sustainability principles</u></b> are applied throughout installation.</p>
3. Clean and maintain work area	<p>3.1. Tools and equipment are cleaned, maintained and stored.</p> <p>3.2. Work area is cleaned and maintained, and waste materials disposed of.</p> <p>3.3. Defective or faulty tools and equipment is recorded and reported.</p>

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> ( <i>may include but not limited to</i> )
1. Diffusers and terminal devices	<p>1.1. Combined diffusers</p> <p>1.2. Control devices</p> <p>1.3. Cushion heads</p> <p>1.4. Grills</p> <p>1.5. Light fittings</p> <p>1.6. Outlets</p> <p>1.7. Registers</p> <p>1.8. Variable air volume box</p>

Range of Variables	
Variable	Range (may include but not limited to)
2. Sustainability principles	2.1. Efficient use of materials 2.2. Efficient energy retention 2.3. Integrity of ducting 2.4. Recycling 2.5. Environmentally friendly

Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment must evidence that the candidate: <ol style="list-style-type: none"> <li>1.1. Checked tools and equipment</li> <li>1.2. Identified and ordered materials</li> <li>1.3. Set-out ducting for air-conditioning and ventilation</li> <li>1.4. Installed ducting</li> <li>1.5. Cleaned and maintained work area</li> </ol>
2. Underpinning knowledge	<ol style="list-style-type: none"> <li>2.1. Tools and equipment</li> <li>2.2. Personal protective equipment (PPE)</li> <li>2.3. Ducting systems</li> <li>2.4. Ducting components and materials</li> <li>2.5. Cleaning and maintenance procedure</li> <li>2.6. Standard operating procedure</li> </ol>
3. Underpinning skills	<ol style="list-style-type: none"> <li>3.1. Checking tools and equipment for serviceability</li> <li>3.2. Identifying and ordering relevant materials</li> <li>3.3. Setting-out ducting</li> <li>3.4. Installing ducting</li> <li>3.5. Cleaning and maintaining work area</li> </ol>
4. Underpinning attitudes	<ol style="list-style-type: none"> <li>4.1. Tidy and punctual</li> <li>4.2. Prompt in carrying out activities</li> <li>4.3. Sincere and honest concerning duties</li> <li>4.4. Active on teamwork</li> <li>4.5. Eager to learn</li> <li>4.6. Concerned for proper use of tools</li> <li>4.7. Committed to occupational health and safety practices</li> <li>4.8. Respectful of peers, subordinates and seniors in the workplace</li> <li>4.9. Communicate with peers and seniors in the workplace</li> </ol>



## Evidence Guide

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

### 5. Resource implications

The following resources must be provided:

- 5.1. Workplace (simulated or actual)
- 5.2. Personal protective equipment (PPE)
- 5.3. Tools and equipment
- 5.4. Materials
- 5.5. Job specifications
- 5.6. Manufacturer's specifications
- 5.7. Standard operating procedure
- 5.8. Projector
- 5.9. Stationary
- 5.10. Learning manual

### 6. Methods of assessment

Methods of assessment may include but is not limited to:

- 6.1. Written test
- 6.2. Oral test
- 6.3. Observation
- 6.4. Demonstration
- 6.5. Portfolio

### 7. Context of assessment

- 7.1. Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.
- 7.2. Assessment must be done by a suitably qualified/certified assessor.

## Accreditation Requirements

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<b>Unit Title:</b>	Perform leak testing
<b>Unit Code:</b>	SEIP-CON-DFA-05-O
<b>Nominal Hours:</b>	50 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to perform leak testing. It specifically includes preparing for leak testing, collecting tools, equipment and materials, testing ducting system, cleaning and maintaining work area.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Prepare for leak testing	<p>1.1. <b><u>Work tasks</u></b> are identified.</p> <p>1.2. Maximum test pressure is determined.</p> <p>1.3. Leak testing method is identified.</p> <p>1.4. Duct fitting connection integrity is checked and inspected.</p> <p>1.5. Devices, fixtures, fittings and components are isolated and shut-off.</p>
2. Collect tools, equipment and materials	<p>2.1. Tools and equipment are identified, collected and checked for serviceability as per job requirement.</p> <p>2.2. Appropriate personal protective equipment (PPE) as per job requirement is collected.</p> <p>2.3. Materials are identified, ordered and collected as per job requirement.</p>
3. Test ducting system	<p>3.1. Test requirements are determined from ducting plans and specifications.</p> <p>3.2. Testing equipment is identified and selected for required tests.</p> <p>3.3. Ducting system is tested under maximum test pressure.</p> <p>3.4. Leak tests are carried out and source of leaks are identified.</p> <p>3.5. Identified leak or leaks are repaired or replaced, as needed.</p> <p>3.6. Testing results recorded in appropriate format.</p>
4. Clean and maintain work area	<p>4.1. Tools and equipment are cleaned, maintained and stored.</p> <p>4.2. Work area is cleaned and maintained, and waste materials disposed of.</p> <p>4.3. Defective or faulty tools and equipment is recorded and reported.</p>

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> ( <b><i>may include but not limited to</i></b> )
1. Work tasks	<p>1.1. Identify ducting to be tested</p> <p>1.2. Identify fittings to be isolated</p> <p>1.3. Isolate system components</p> <p>1.4. Check tightness of joints and fittings</p>

## Evidence Guide

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

<b>1. Critical aspects of competency</b>	Assessment must evidence that the candidate: <b>1.1.</b> Prepared for leak testing <b>1.2.</b> Isolated and shut-off devices, fixtures, fittings and components <b>1.3.</b> Checked tools and equipment <b>1.4.</b> Determined testing requirements <b>1.5.</b> Carried out leak tests <b>1.6.</b> Identified and repaired leaks <b>1.7.</b> Cleaned and maintained work area
<b>2. Underpinning knowledge</b>	<b>2.1.</b> Tools and equipment <b>2.2.</b> Personal protective equipment (PPE) <b>2.3.</b> Ducting systems <b>2.4.</b> Ducting components and materials <b>2.5.</b> Isolation and shut-off process <b>2.6.</b> Leak testing and repair <b>2.7.</b> Cleaning and maintenance procedure <b>2.8.</b> Standard operating procedure
<b>3. Underpinning skills</b>	<b>3.1.</b> Checking tools and equipment for serviceability <b>3.2.</b> Identifying and ordering relevant materials <b>3.3.</b> Isolating and shutting-off devices, fixtures, fittings and components <b>3.4.</b> Carrying out leak testing and repair <b>3.5.</b> Cleaning and maintaining work area
<b>4. Underpinning attitudes</b>	<b>4.1.</b> Tidy and punctual <b>4.2.</b> Prompt in carrying out activities <b>4.3.</b> Sincere and honest concerning duties <b>4.4.</b> Active on teamwork <b>4.5.</b> Eager to learn <b>4.6.</b> Concerned for proper use of tools <b>4.7.</b> Committed to occupational health and safety practices <b>4.8.</b> Respectful of peers, subordinates and seniors in the workplace <b>4.9.</b> Communicate with peers and seniors in the workplace

### Evidence Guide

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

#### 5. Resource implications

The following resources must be provided:

- 5.1. Workplace (simulated or actual)
- 5.2. Personal protective equipment (PPE)
- 5.3. Tools and equipment
- 5.4. Materials
- 5.5. Job specifications
- 5.6. Manufacture's specifications
- 5.7. Standard operating procedure
- 5.8. Projector
- 5.9. Stationary
- 5.10. Learning manual

#### 6. Methods of assessment

Methods of assessment may include but is not limited to:

- 6.1. Written test
- 6.2. Oral test
- 6.3. Observation
- 6.4. Demonstration
- 6.5. Portfolio

#### 7. Context of assessment

- 7.1. Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency.
- 7.2. Assessment must be done by a suitably qualified/certified assessor.

### Accreditation Requirements

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<b>Unit Title:</b>	Erect and dismantle scaffolding
<b>Unit Code:</b>	SEIP-CON-DFA-06-O
<b>Nominal Hours:</b>	30 hours
<b>Unit Descriptor:</b>	This unit covers the skills, knowledge and attitudes required to erect and dismantle scaffolding. It specifically includes erecting scaffolding, dismantling scaffolding, and cleaning and maintaining work area.
<b>Elements of Competency</b>	<b>Performance Criteria</b> ( <b><u>bold and underlined</u></b> terms are elaborated in the Range of Variables)
1. Collect tools, equipment and materials	<p>1.1. Tools and equipment are identified, collected and checked for serviceability as per job requirement.</p> <p>1.2. Appropriate personal protective equipment (PPE) as per job requirement is collected.</p> <p>1.3. Materials are identified, ordered and collected as per job requirement.</p>
2. Erect scaffolding	<p>2.1. Job requirement is confirmed and work tasks identified.</p> <p>2.2. Loading on scaffolding and support structures is determined.</p> <p>2.3. Site access and egress routes are identified.</p> <p>2.4. <b><u>Scaffolding</u></b> and <b><u>components</u></b> are identified and selected.</p> <p>2.5. Sole board/base plate is selected as per manufacturer's specifications.</p> <p>2.6. Scaffolding is set out and erected as per standard operating procedure and manufacturer's specifications.</p> <p>2.7. Static lines are erected and installed.</p> <p>2.8. <b><u>Lifting device</u></b> is assembled and erected.</p>
3. Dismantle scaffolding	<p>3.1. Scaffolding is isolated and appropriately signed and barricaded to ensure safe dismantling.</p> <p>3.2. Scaffolding is carefully dismantled using reverse erection procedure.</p> <p>3.3. Scaffolding components are inventoried and returned to storage area as per standard operating procedure.</p>
4. Clean and maintain work area	<p>4.1. Tools and equipment are cleaned, maintained and stored.</p> <p>4.2. Work area is cleaned and maintained, and waste materials disposed of.</p> <p>4.3. Defective or faulty tools and equipment is recorded and reported.</p>

Range of Variables	
Variable	Range (may include but not limited to)
1. Scaffolding	1.1. Steel 1.2. Timber 1.3. Bamboo
2. Components	2.1. Bracing 2.2. Fixed/rotating clamps 2.3. U-jack 2.4. Plate jack 2.5. Lock pins 2.6. Steel/wood platform 2.7. Steel/wood ladder 2.8. Nuts and bolts
3. Lifting device	3.1. Forklift 3.2. Truck crane 3.3. Tower crane 3.4. Derrick 3.5. Pulley 3.6. Hoist

Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment must evidence that the candidate: <ol style="list-style-type: none"> <li>1.1. Erected scaffolding</li> <li>1.2. Determined loading</li> <li>1.3. Installed static lines</li> <li>1.4. Assembled and erected lifting device</li> <li>1.5. Dismantled scaffolding</li> <li>1.6. Cleaned and maintained work area</li> </ol>
2. Underpinning knowledge	<ol style="list-style-type: none"> <li>2.1. Scaffolding</li> <li>2.2. Loading allowance</li> <li>2.3. Erection and dismantling process</li> <li>2.4. Static lines</li> <li>2.5. Lifting devices</li> <li>2.6. Standard operating procedure</li> <li>2.7. Cleaning and maintenance procedure</li> </ol>

## Evidence Guide

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

<b>3. Underpinning skills</b>	<b>3.1.</b> Erecting scaffolding <b>3.2.</b> Installing static lines <b>3.3.</b> Assembling lifting device <b>3.4.</b> Dismantling scaffolding <b>3.5.</b> Cleaning and maintaining work area
<b>4. Underpinning attitudes</b>	<b>4.1.</b> Tidy and punctual <b>4.2.</b> Prompt in carrying out activities <b>4.3.</b> Sincere and honest concerning duties <b>4.4.</b> Active on teamwork <b>4.5.</b> Eager to learn <b>4.6.</b> Concerned for proper use of tools <b>4.7.</b> Committed to occupational health and safety practices <b>4.8.</b> Respectful of peers, subordinates and seniors in the workplace <b>4.9.</b> Communicate with peers and seniors in the workplace
<b>5. Resource implications</b>	The following resources must be provided: <b>5.1.</b> Workplace (simulated or actual) <b>5.2.</b> Personal protective equipment (PPE) <b>5.3.</b> Tools and equipment <b>5.4.</b> Scaffolding <b>5.5.</b> Scaffolding components <b>5.6.</b> Lifting device <b>5.7.</b> Standard operating procedure <b>5.8.</b> Projector <b>5.9.</b> Stationary <b>5.10.</b> Learning manual
<b>6. Methods of assessment</b>	Methods of assessment may include but is not limited to: <b>6.1.</b> Written test <b>6.2.</b> Oral test <b>6.3.</b> Observation <b>6.4.</b> Demonstration <b>6.5.</b> Portfolio
<b>7. Context of assessment</b>	<b>7.1.</b> Competency assessment must be done in a training institute or an actual or simulated workplace after completion of this unit of competency. <b>7.2.</b> Assessment must be done by a suitably qualified/certified assessor.

**Evidence Guide**

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

**Accreditation Requirements**

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any NTVQF qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.