Defence Awarding Organisation

Qualification Handbook

DAO Level 5 Diploma for Construction Draughtsman (Military Engineering)

QN: 603/1463/1

The Qualification

Overall Objective for the Qualifications

This handbook relates to the following qualification:

DAO Level 5 Diploma for Construction Draughtsman (Military Engineering)

This Level 5 Diploma provides the standards that must be achieved by individuals that are working within the Armed Forces.

Pre-entry Requirements
Entry requirements are detailed in the Course prospectus.
Learners who are taking this qualification should be employed in the ME Design Draughtsman trade. Learners should normally have completed a Class 2 ME Design Draughtsman course and hold an appropriate Level 3 qualification

Unit Content and Rules of Combination

This qualification is made up of a total of 14 mandatory units and 5 Optional units. To be awarded this qualification the candidate must achieve a total of 64 credits from the mandatory units as shown in the table below. Optional units may be achieved as appropriate.

Mandatory Units					
URN	**Unit of assessment**	**Level**	**Credit Value**	**GLT**	**TQT**
H/615/4259	Work safely during Draughtsman tasks	3	2	18	20
M/615/7391	Plan and cost a Draughting task	5	3	22	28
T/615/7392	Project and contract management	4	3	24	30
A/615/4266	Use Draughtsman Trade Equipment	3	9	70	90
A/615/7393	Fire escape stairs	4	2	12	16
F/615/7394	Design and produce working drawing packages for multiple storey design	5	26	57	261
J/615/7395	Damp Proof Tanking	4	2	10	20
L/615/7396	Upper Floor design and detailing	5	3	12	30

R/615/7397	Design layouts and produce working drawings for multiple building drainage systems	4	3	16	28
Y/615/7398	Large Profile Roof design and detailing	5	3	17	28
D/615/7399	Produce scheme design drawings for sewage treatment works	5	2	10	18
J/615/7400	Produce technical drawings of Non Equipment Bridges	5	3	16	27
L/615/7401	Advise on complex draughtsman tasks including capabilities and costs	4	1	5	7
R/615/7402	Supervise and mentor design trade staff	5	2	12	16
		Totals	64	301	619
	42 Credits at L5				
	11 Credits at L4				
	9 Credits at L3				
	2 Credits at L2				
	Optional Units				
Y/615/7403	Use computer aided design (CAD) software	3	9	83	89
D/615/7404	Produce Contract drawings	5	2	12	16
H/615/7405	Produce drawings for reinforced concrete raft foundations and stairs	4	3	16	30
K/615/7406	Produce drawings for sanitation works	4	2	13	18
M/615/7407	Produce working drawings of culverts	4	1	8	10

Age Restriction

This qualification is available to learners aged 18 years and over

Opportunities for Progression

This qualification creates a number of opportunities for progression through career development and promotion. By following the Trade stream to SNCO rank or, if selected to Clerk of Works (C) course leading on successful completion to a Foundation Degree

Exemption

No exemptions have been identified.

Credit Transfer

Credits from identical RQF units that have already been achieved by the learner may be transferred.

Glossary

For the purposes of this qualification the definitions below apply.

Advise	Consults with; gives advice to; counsels; gives information or notice to; recommends course of action (particularly applicable to staff and technical fields); advises a course of action
Apply	Puts in use, employs; applies to a situation
Assist	Aids, help, support, Assists in performing task
Calculate	Determines by mathematical processes, implies highly intricate processes as against computes, which implies simple arithmetical process and exact results; forecast consequences or results, as in taking risks
Carry out	Takes action on basis of
Communicate	Gets in touch with others through letters, messages or orally
Compile	Collects into proper or designated form; complies data into a report. Composes put of materials form another document, reports and statistical summaries, from other reports
Conduct	Supervises and personally performs work necessary to accomplish the results desired
Conduct	Personally performs work necessary to accomplish the results desired; to perform;
Define	Determines or sets down the boundaries of, sets down or show the precise outlines of; determines and states the limits and nature of; describes exactly; gives the distinguishing characteristics of; states or explains the meaning of
Describe	Tells or writes about; gives a detailed account of; describes symptoms of a problem
Design	Plans, sketches a pattern or outline for; contrives;
Determine	Sets bounds or limits to, comes to a decision concerning, obtains definite and first-hand knowledge
Differentiate	Perceives or expresses the difference; distinguishes between
Distinguish	Recognises or discriminates one thing from another; perceives clearly
Establish	Makes firm, set out on a firm basis, as in establishing a specific procedure to be followed
Explain	Makes something clear or intelligible; interprets to assure understanding
Identify	Establishes the identity of, distinguishes or discriminates
Interpret	Make out or bring out the meaning of:

List	Make a list of; enter in a list
Measure	Ascertains the extend, degree, quantity, dimensions or capacity of, by a standard
Prepare	Make ready or get ready for
Produce	Bring into existence; cause or bring about; extend or continue
Record	Writes, enters, registers for purpose of evidence or reproduction, records data in a record book
Select	Takes by preference from among others; picks out or from;
State	Say or express, fully or clearly, in speech or writing
Supervise	Gives directs orders and instructions followed up by personal observation of activities of subordinates.
Use	Employ, partakes of; exploits

Qualification Units

URN:	H/615/4259	
Title:	Work safely during Draughtsman tasks	
Level:	3	
Credit value:	2	
GLH	18	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Interpret current health and safety legislation relating to trade	1.1 Identify the requirement to comply with current health and safety regulations and standards when carrying out trade tasks 1.2 Identify workplace sources of information and guidance on health and safety issues 1.3 Adhere to current trade related health and safety legislation 1.4 Comply with workplace sources of information and guidance on trade related health and safety issues	
2. Determine a safe system of work	2.1 Identify hazards and risks related to the work environment 2.2 Establish health and safety requirements for trade equipment 2.3 Identify health and safety requirements for trade materials 2.4 Identify correct manual handling techniques when lifting items alone 2.5 Identify correct manual handling techniques when lifting items with assistance from others 2.6 Differentiate between the warning signage and labels for trade hazardous materials and substances 2.7 Differentiate between the uses of in service firefighting equipment 2.8 Determine the extent of one's own authority regarding the health and safety responsibilities for other personnel 2.9 Establish the reporting lines for health and safety issues	
3. Carry out risk assessment for task	3.1 Identify methods of assessing risk associated to a trade task 3.2 Identify methods of recognising hazards associated to a trade task 3.3 Clarify work area risks associated with a task 3.4 Identify environmental hazards associated with a trade task 3.5 Identify hazards to others from task activities 3.6 Establish hazards created by concurrent allied trade tasks 3.7 Identify the methods of carrying out risk assessment	

	3.8 Produce a risk assessment 3.9 Record findings of risk assessments 3.10 Record mitigated risks identified 3.11 Report to chain of command any risks that cannot be mitigated
4. Prepare a safe working environment for the task	4.1 Identify the importance of working in a safe environment 4.2 Identify workplace environmental hazards 4.3 Identify a safe task area when working in hazardous conditions 4.4 Select an area for the safe storage of task material 4.5 Assemble environmental protection measures
5. Determine correct personal protective equipment for task	5.1 Define the need for personal protective equipment when working within hazardous materials, equipment or environments 5.2 Select and use appropriate personal protective equipment for task
6. Comply with accident and emergency procedures	6.1 Identify the need to react appropriately to accidents and emergencies 6.2 Identify qualified first aiders, appointed personnel and first aid equipment / facilities 6.3 Comply with set procedures in the event of an injury to self and / or other personnel 6.4 Establish the set procedures in the event of fire / incidents that require evacuation of workplace / location 6.5 Carry out set procedures in the event of dangerous occurrences
7. Determine safe storage requirements for task materials and consumables	7.1 Identify the legislation related to storage of hazardous materials and consumables 7.2 Identify the hazardous materials and consumables required for trade tasks 7.3 Identify the security measures associated with trade materials and consumables 7.4 Identify the methods safely separating of hazardous, fragile materials and consumables 7.5 Comply with COSHH and storage legislation 7.6 Safely separate hazardous and fragile materials and consumables 7.7 Securely store trade materials and consumables
8. Prepare trade equipment for task	8.1 Establish the requirement to maintain the serviceability of trade related equipment 8.2 Identify trade equipment for task 8.3 Establish procedures for reporting equipment deficiencies or performance issues 8.4 Carry out the appropriate inspection or maintenance required to prepare equipment for task within own capability and authority

9. Prepare to use ICT draughting equipment safely	9.1 Identify the importance of using draughting ICT equipment safely 9.2 Identify hazards associated with the use of ICT draughting equipment 9.3 Identify workplace ICT draughting equipment risks 9.4 Carry out a Display Screen Equipment (DSE) Regulations Assessment 9.5 Comply with DSE regulations assessment requirements 9.6 Use ICT draughting equipment safely in the design office
Additional information about the unit	
Unit aim(s)	On completion of this unit, learners will be able to work safely whilst engaged in the range of draughtsman tasks.
Unit expiry date	2 Years
Assessment requirements specified by a sector or regulatory body (if appropriate)	This unit requires the assessment of occupational competence under realistic conditions wherever practicable. For the knowledge and understanding component of the unit, assessment from a learning and development environment is allowed.
Name of the organisation submitting the unit	Defence Awarding Organisation
Availability for use	Restricted

URN:	M/615/7391	
Title:	Plan and cost a Draughting task	
Level:	5	
Credit value:	3	
GLH	22	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Establish task requirement from briefings	1.1 Identify the need to accurately determine task requirements from briefings 1.2 Identify the methods used to effectively extract information from line management verbal and written briefings 1.3 Identify the lines of communication between task authority and line management 1.4 Identify the technical information required to be extracted from briefings to establish task requirements 1.5 Distinguish the processes used to determine permitted task timelines 1.6 Establish task requirements from briefings 1.7 Identify the financial elements of a task budget 1.8 Extract task budget information from data provided by task authority, line management or contractor	
2. Interpret information from technical drawings	2.1 Identify the range of methods used to impart drawn information 2.2 Identify the features of the different categories of engineering drawings 2.3 Identify the process used to select drawing sheets for task 2.4 Identify the arrangement of a drawing sheet 2.5 Identify the features of arrangement drawings 2.6 Establish the features used to create projected drawn views 2.7 Identify the range of general arrangement drawings used to present drawn information 2.8 Identify the use of drawn lines from drawings 2.9 Determine the technical information depicted by drawn lines 2.10 Identify the range of character fonts and styles used to develop drawing information 2.11 Identify the elements that make up a drawing sheet 2.12 Identify the methods used to number drawings 2.13 Interpret information contained within drawings	
3. Interpret specifications	3.1 Identify the need for drawn specifications to visually communicate technical information 3.2 Identify the methods used to provide a range of annotation	

	used to depict specification 3.3 Identify the techniques used to express drawing scales 3.4 Identify the range of unit symbols and markers used to represent technical specification 3.5 Identify the process of representing engineering tolerances 3.6 Identify the methods used to depict technical references. 3.7 Identify the methods of incorporating dimensions into drawings 3.8 Identify the methods of depicting material specification 3.9 Identify the range and use of abbreviations used to depict technical specifications 3.10 Identify the process of recording amended information 3.11 Identify the methods of incorporating component specifications into a drawing 3.12 Identify the methods of incorporating assembly specifications into a drawing 3.13 Identify the process of illustrating existing component specification into drawing 3.14 Interpret specifications , notes and annotations contained within drawings and sketches
4. Carry out task related calculations	4.1 Identify the requirement to carryout trade related design calculations 4.2 Identify the use of metric units of measurement 4.3 Identify the use of imperial equivalent units of measurement 4.4 Identify the requirement to apply SI prefixes to calculations 4.5 Identify methods of solving volume problems 4.6 Identify methods of using proportion and percentages in design tasks 4.7 Identify methods of solving area problems 4.8 Identify methods of solving temperature problems 4.9 Identify methods of using equations to solve design tasks 4.10 Identify methods of solving monetary problems 4.11 Identify methods of solving time problems 4.12 Identify methods of using Trigonometry in design tasks 4.13 Identify methods of calculating scale and ratios 4.14 Identify methods of using Geometry to solve design problems 4.15 Identify methods of using angles in design tasks 4.16 Identify methods of solving basic Algebraic problems 4.17 Identify methods of using graphs in trade tasks 4.18 Identify methods of using formulae in design tasks 4.19 Identify methods of using estimating, rounding and averages in trade tasks 4.20 Identify methods of using Indices to solve task problems 4.21 Identify methods of using the Sine and Cosine Rule to solve task problems
5. Calculate task	5.1 Identify the requirement to determine task costs

related costs	5.2 Determine factors that affect cost calculations 5.3 Identify factors that affect labour costs 5.4 Identify factors that influence material costings 5.5 Establish factors that affect equipment expenditure 5.6 Identify methods of calculating labour costs 5.7 Identify methods of calculating other costs 5.8 Identify methods of calculating material costs 5.9 Calculate the cost of materials, consumables and spares required to complete the task within - 0% +10% 5.10 Calculate task costs
6. Determine task resources	6.1 Identify the requirement for Design Draughtsmen to determine task resources 6.2 Identify the process of estimating task resources 6.3 Identify the standard forms used to resource tasks 6.4 Identify the recognised process of using designation of quantities to estimate task resources 6.5 Establish the industry standard sizes for task materials 6.6 Identify the process of calculating the working and storage areas for a task 6.7 Identify the phases of a task and their relationship to task resourcing 6.8 Identify the reference material available to calculate task resources 6.9 Establish the procedures used to calculate task resources 6.10 Identify methods of procuring resources through supply chain or by direct purchase 6.11 Determine the resource requirement for each stage of the task using industry standard forms and material sizes 6.12 Calculate the working area size and facilities to include storage of materials 6.13 Calculate the materials, consumables and spares required to complete the task within - 0% / + 30% tolerance
7. Produce a technical plan for the task	7.1 Identify the requirement to produce technical plans 7.2 Identify the process to produce technical plans 7.3 Identify methods to recognise constraints 7.4 Identify the impact of assumptions made during initial assessment of task 7.5 Establish process to identifying limiting factors 7.6 Identify factors critical to task success 7.7 Establish methods of identifying concurrent tasks 7.8 Identify methods of predicting task completion date 7.9 Establishing a task start date 7.10 Identify sequence of task stages 7.11 Identify the process of producing a task works programme 7.12 Identify standards appropriate to task 7.13 Identify methods producing a legible works programme

	7.14 Produce a legible works programme 7.15 Identify completion date to a tolerance of +0% - 30% 7.16 Establish the quantity of material by type required for the task 7.17 Identify the methods used to produce material and consumables list from drawings 7.18 Identify available budgets for the task 7.19 Estimate task costs by considering cost effectiveness of proposed solutions 7.20 Produce a legible and detailed works programme. 7.21 Identify methods to calculate completion date to a tolerance of +0% -10% from works programme
8. Communicate task solution to task authority	8.1 Identify the requirement for Design Draughtsmen to communicate task solution to authority 8.2 Identify the process of initiating communication with the authority 8.3 Establish methods of communicating with the authority 8.4 Identify methods to calculate budget requirements 8.5 Compile information for inclusion into task solution briefing 8.6 Identify any aspect of the task solution identified as beyond own capabilities 8.7 Identify methods to communicate proposed task solutions with justifications for their selection 8.8 Convey proposed task solution including costs to task authority
Additional information about the unit	
Unit aim(s)	On completion of this unit, learners will be able to gather and interpret data to plan a range of draughtsman tasks.
Unit expiry date	2 Years
Assessment requirements specified by a sector or regulatory body (if appropriate)	This unit requires the assessment of occupational competence under realistic conditions wherever practicable. For the knowledge and understanding component of the unit, assessment from a learning and development environment is allowed.
Name of the organisation submitting the unit	Defence Awarding Organisation
Availability for use	Restricted
Availability for delivery	N/A

URN:	T/615/7392	
Title:	Project and contract management	
Level:	4	
Credit value:	3	
GLH	24	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Identify project management skills	1.1 Identify project management terminology 1.2 Identify the benefits of project management 1.3 Distinguish project management tools 1.4 Establish roles and responsibilities of key project personnel 1.5 Interpret project documentation 1.6 Apply project stages 1.7 Produce a detailed project plan	
2. Identify contractual processes	2.1 Define the term 'gift taking' 2.2 Define the term 'contract' 2.3 Define the term 'commercial awareness' 2.4 Define the term 'unintentional contracts' 2.5 Identify contract and commercial impact in the organisational context 2.6 Interpret the commercial process 2.7 Apply contract documentation 2.8 Apply quality control (*QC)* measures	
Additional information about the unit		
Unit aim(s)	On completion of this unit learners will be able to identify project and contract management processes	
Unit expiry date	2 Years	
Assessment requirements specified by a sector or regulatory body (if appropriate)	This unit requires the assessment of occupational competence under realistic conditions wherever practicable. For the knowledge and understanding component of the unit, assessment from a learning and development environment is allowed.	
Name of the organisation submitting the unit	Defence Awarding Organisation	
Availability for use	Restricted	

URN:	A/615/4266	
Title:	Use Draughtsman Trade Equipment	
Level:	3	
Credit value:	9	
GLH	70	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Identify trade equipment and materials for task	1.1 Define the need to recognise trade equipment and materials for task 1.2 Identify trade equipment for task 1.3 Identify Point of Contact (POC) to procure appropriate resources 1.4 Identify tools and materials in accordance with an invoice and or resources stores list 1.5 Assist POC in the identification of equipment 1.6 Identify trade consumables for task 1.7 Select trade consumables for task 1.8 Select appropriate equipment for task	
2. Inspect draughtsman trade equipment and materials	2.1 Define the need to inspect trade equipment and materials for task 2.2 Identify the methods used to inspect task equipment 2.3 Identify methods of recording equipment inspection and service history 2.4 Identify methods of confirming suitability of materials 2.5 Check suitability of materials for task 2.6 Examine equipment documentation to confirm serviceability 2.7 Conduct any remedial inspection or maintenance of task equipment 2.8 Communicate any remedial actions that prevents tools/equipment being used for task	
3. Use manual draughting equipment	3.1 Identify the requirement to use manual draughting equipment 3.2 Identify manual draughting equipment 3.3 Identify the methods of using manual draughting equipment to draw manually 3.4 Use manual draughting aids to draw manually	
4. Use measuring devices	4.1 Identify the need to use trade measuring equipment 4.2 Identify the methods of using scientific calculators to develop construction design information 4.3 Establish how the environment can affect taking accurate site measurements 4.4 Identify the methods of taking accurate site measurements	

	using measuring equipment 4.5 Identify the use of measuring equipment 4.6 Identify the correct care and maintenance of measuring equipment 4.7 Identify measuring devices 4.8 Identify the safe methods of using laser measuring equipment's 4.9 Identify the correct methods of using measuring equipment 4.10 Identify the correct care and maintenance of measuring equipment 4.11 Measure distance using analogue measuring equipment 4.12 Measure distance using measuring equipment 4.13 Establish measurements and angles using measuring equipment 4.14 Operate scientific calculators 4.15 Select appropriate measuring equipment for drawing task 4.16 Use measuring equipment to develop design task 4.17 Select appropriate measuring device for task 4.18 Prepare measuring equipment to carry out task 4.19 Use measuring equipment to carry out task
5. Use ICT devices	5.1 Identify the need of ICT equipment for draughting tasks 5.2 Identify current ICT equipment used to produce draughting tasks 5.3 Identify the method of visually inspecting ICT equipment for serviceability 5.4 Identify the requirement to comply with portable appliance testing procedures 5.5 Setup draughting ICT equipment to provide draughting products 5.6 Identify the requirement to carry out display screen risk assessments before using ICT equipment 5.7 Identify the process of completing display screen risk assessments for ICT equipment 5.8 Carry out display screen equipment risk assessment 5.9 Record display screen equipment risk assessment. 5.10 Comply with findings of display screen equipment risk assessment 5.11 Use ICT equipment to produce draughting products
6. Utilise trade ICT software	6.1 Identify the use of trade ICT software for draughting tasks 6.2 Identify current trade software programmes and applications 6.3 Identify the operating procedures to use trade software programmes and applications 6.4 Identify the point of contact to procure and update trade related software applications 6.5 Use ICT software applications to provide trade support for project
7. Working safely	7.1 Identify the need to work safely with trade equipment and

with trade tools/equipment	materials 7.2 Identify the current safety legislation relating to trade equipment 7.3 Identify the safety legislation relating to the use of trade materials 7.4 Identify the methods of working safely with trade equipment and materials 7.5 Identify safe and responsible methods of disposing of draughting trade waste/ defunct equipment 7.6 Apply safe working methods when working on task
Additional information about the unit	
Unit aim(s)	On completion of this unit, learners will be able to use trade equipment for a range of draughtsman tasks.
Unit expiry date	2 Years
Assessment requirements specified by a sector or regulatory body (if appropriate)	This unit requires the assessment of occupational competence under realistic conditions wherever practicable. For the knowledge and understanding component of the unit, assessment from a learning and development environment is allowed.
Name of the organisation submitting the unit	Defence Awarding Organisation
Availability for use	Restricted
Availability for delivery	N/A

URN:	A/615/7393	
Title:	Fire Escape stairs	
Level:	4	
Credit value:	2	
GLH	12	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Apply building technology to Fire Escape stair design tasks	1.1 Identify the requirement for Fire Escape stairs in construction tasks 1.2 Identify the factors that affect Fire Escape stair design 1.3 Identify the building technology used in Fire Escape stair design 1.4 Identify the design characteristics of materials used in Fire Escape stair construction 1.5 Establish the building technology used in Fire Escape stairs construction 1.6 Identify the technology used to improve the durability of stairs 1.7 Establish the factors that affect the selection of Fire Escape stair designs 1.8 Identify the technology used to provide fire resistance for Fire Escape stairs 1.9 Establish methods of interpreting specified Fire Escape stair design information 1.10 Identify the approved design information used in Fire Escape stairs designs using approved references 1.11 Identify methods of interpreting Fire Escape Stair design information to produce drawings 1.12 Identify methods of determining stair design information to produce drawings using approved references 1.13 Apply building technology into stair design drawings	
2. Produce Fire Escape stair drawings	2.1 Identify the functions of stairs 2.2 Identify types of stairs 2.3 Identify components used in stair construction 2.4 Identify materials used for stair-construction 2.5 State design criteria for stairs 2.6 Select design information for stairs 2.7 Interpret design information 2.8 Carry out stair design from selected information 2.9 Produce sketches of stairs 2.10 Produce technical drawings of stairs including accurate	

	annotation and in accordance with the specification 2.11 Distinguish the prescribed fire resistance measures required to be incorporated into fire escape stairs 2.12 Identify the methods used to position fire escape signage and escape lighting luminaries in line with approved documentation 2.13 Identify methods to calculate minimum width of the escape route and calculate exit capacity 2.14 Establish the correct clear headroom for fire escape stairs 2.15 Calculate the exit and occupancy capacity for a fire escape stair design 2.16 Establish minimum width of the escape stairs and calculate exit capacity 2.17 Produce technical drawings of fire escape stairs including accurate annotation and in accordance with the specification
Additional information about the unit	
Unit aim(s)	On completion of this unit, learners will be able to design and produce drawings for Fire Escape stairs and stair components.
Unit expiry date	2 years
Assessment requirements specified by a sector or regulatory body (if appropriate)	This unit requires the workplace assessment of occupational competence wherever practicable. For the knowledge and understanding component of the unit, assessment from a learning and development environment is allowed.
Name of the organisation submitting the unit	Defence Awarding Organisation
Availability for use	Restricted
Availability for delivery	N/A

URN:	F/615/7394	
Title:	Design and produce working drawing packages for multiple storey design	
Level:	5	
Credit value:	26	
GLH	57	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Carry out design analysis for multiple storey buildings	1.1 Determine fire resistance design parameters 1.2 Determine thermal insulation design parameters 1.3 Determine sound insulation design parameters 1.4 Determine durability design parameters 1.5 Determine structural stability design parameters 1.6 Determine access and egress design parameters 1.7 Determine the design parameters for optimum building location and orientation 1.8 Determine design parameters for environmental conditions 1.9 Determine the parameters of ergonomic design 1.10 Determine the design parameters for the characteristics of construction material 1.11 Determine the design parameters of optimum appearance for buildings and structures 1.12 Verify approved documentation and legislation 1.13 Analyse approved documentation and legislation 1.14 Design multiple storey buildings in accordance with completed design analysis and within determined parameters	
2. Produce sketch designs and presentation drawings for multiple storey buildings	2.1 Identify approved documentation used to select information to produce multiple storey building designs 2.2 Interpret approved documentation to produce multiple storey building designs 2.3 Design layout for multiple storey buildings using information gathered 2.4 Produce schedules of areas for multiple storey building designs 2.5 Produce location and site plan drawings for multiple storey building designs 2.6 Produce arrangement drawings for multiple storey building projects 2.7 Produce presentation drawings for multiple storey building designs	
3. Produce	3.1 Describe the process of producing working drawing packages	

working drawing packages for multiple storey buildings	for a multiple storey building project 3.2 Demonstrate understanding of construction methods, materials and detailing for multiple storey buildings 3.3 Demonstrate understanding of how construction elements relate and interact to each other in a working drawing package for multiple storey buildings 3.4 Demonstrate understanding of how construction elements are detailed in a working drawing package for multiple storey buildings 3.5 Identify approved documentation used to select information to produce multiple storey construction design information 3.6 Interpret approved documentation used to select information to produce multiple storey construction design information 3.7 Identify information to select construction solutions for multiple storey buildings (non-structural elements) using resourced information 3.8 Produce construction location and site plan drawings for a multiple storey building 3.9 Draw arrangement drawings for multiple storey building projects. 3.10 Draw construction drawings for a multiple storey building project 3.11 Draw construction details for a multiple storey building project 3.12 Produce construction schedules for a multiple storey building project 3.13 Produce a complete working drawing package within the constraints of a given design brief and included specification for a multiple storey building
4. Calculate quantities of construction materials for multiple storey building projects	4.1 Identify the methods of calculating quantities of construction materials 4.2 Identify approved documentation used to select information to calculate quantities of construction materials 4.3 Interpret approved documentation used to select information to calculate quantities of construction materials 4.4 Calculate quantities of construction materials for multiple storey building projects
Additional information about the unit	
Unit aim(s)	On completion of this unit, learners will be able to design and produce working drawing packages for multiple storey buildings.
Unit expiry date	2 years
Assessment requirements specified by a sector or regulatory	This unit requires the assessment of occupational competence under realistic conditions wherever practicable. For the knowledge and understanding component of the unit, assessment from a

body (if appropriate)	learning and development environment is allowed.
Name of the organisation submitting the unit	Defence Awarding Organisation
Availability for use	Restricted

URN:	J/615/7395	
Title:	Damp Proof Tanking	
Level:	4	
Credit value:	2	
GLH	10	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Produce technical drawings for damp proof tanking	1.1 State the definition of damp proof tanking 1.2 Determine information required to design tanking for a basement 1.3 Identify the forms of damp proof tanking 1.4 Identify the requirement for damp proofing products in construction tasks 1.5 Identify the characteristics of damp proofing methods 1.6 Identify the composition of materials used in damp proofing and membrane applications 1.7 Identify the performance criteria of damp proofing designs 1.8 Distinguish the factors that affect the selection of damp proofing products 1.9 Identify methods of interpreting damp proof design information to develop drawing 1.10 Identify approved documentation information required to select the correct damp proofing for tanking 1.11 Interpret approved documentation information to select damp proofing for tanking 1.12 Interpret damp proof design information to develop drawings 1.13 Produce sketches of damp proofing tanking 1.14 Produce drawings of damp proofing tanking including accurate annotation and in accordance with the supplied or identified specification	
Additional information about the unit		
Unit aim(s)	On completion of this unit, learners will be able to select and detail damp proof tanking for construction drawings.	
Unit expiry date	2 years	
Assessment requirements specified by a sector	This unit requires the assessment of occupational competence under realistic conditions wherever practicable. For the knowledge and understanding component of the unit,	

or regulatory body (if appropriate)	assessment from a learning and development environment is allowed.
Name of the organisation submitting the unit	Defence Awarding Organisation
Availability for use	Restricted
Availability for delivery	N/A

URN:	L/615/7396	
Title:	Upper Floor design and detailing	
Level:	5	
Credit value:	3	
GLH	12	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Apply building technology to upper floor design tasks	1.1 Identify the requirement for upper floors in construction tasks 1.2 Identify the characteristics of upper floor designs 1.3 Identify construction methods of upper floor designs 1.4 Identify the characteristics of materials used in upper floors 1.5 Identify the factors that affect upper floor design 1.6 Identify the relationship between the floor and surrounding elements 1.7 Identify the building technology used to construct suspended concrete upper floors 1.8 Establish the building technology used to construct timber upper floors 1.9 Identify the building technology used to improve durability of floors 1.10 Identify the building technology used to provide fire resistance to floors 1.11 Identify the building technology used to provide sound insulation to floors 1.12 Establish methods of interpreting specified upper floor design information 1.13 Identify the approved design information used to select upper floor design information 1.14 Identify methods of interpreting upper floor design information to produce drawings 1.15 Interpret approved documentation to select upper floor design information for drawing task 1.16 Identify methods of determining floor design information to produce upper floor drawings 1.17 Use building technology to produce upper floor designs	
2. Produce upper floor drawings	2.1 Identify the functions of upper floors 2.2 Identify types of upper floors 2.3 Identify components used in upper floor construction 2.4 Identify materials used for upper floor construction 2.5 Identify the methods of installing upper floors 2.6 State design criteria for upper floors	

	2.7 Select design information for upper floors 2.8 Identify approved documentation required for the selection of upper floor design information 2.9 Interpret approved documentation to select information to produce appropriate upper floor design for a task 2.10 Interpret design information 2.11 Carry out floor design from selected information 2.12 Produce sketches of upper floor designs 2.13 Produce drawings of upper floor designs including accurate annotation and in accordance with the supplied or identified specification
Additional information about the unit	
Unit aim(s)	On completion of this unit, learners will be able to carry out upper floor designs and produce details for construction drawings.
Unit expiry date	2 years
Assessment requirements specified by a sector or regulatory body (if appropriate)	This unit requires the workplace assessment of occupational competence wherever practicable. For the knowledge and understanding component of the unit, assessment from a learning and development environment is allowed.
Name of the organisation submitting the unit	Defence Awarding Organisation
Availability for use	Restricted

URN:	R/615/7397	
Title:	Design layouts and produce working drawings for multiple building drainage systems	
Level:	4	
Credit value:	3	
GLH	16	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Produce working drawings for drainage systems for multiple buildings	1.1 Identify the design requirements for above and below ground drainage systems 1.2 Identify the method of calculating foul water drain sizes 1.3 Identify the design requirements for surface water disposal 1.4 Identify the method of calculating the sizes of surface water drains 1.5 Identify the layout, components and design of foul water drainage systems 1.6 Identify the layout, components and design of surface water disposal systems 1.7 Identify the approved documentation required to produce drainage drawings for multiple buildings 1.8 Interpret the information from approved documentation to produce drainage drawings for multiple buildings 1.9 Identify annotation information for drainage drawings for multiple buildings 1.10 Identify appropriate drawing symbols to produce drainage systems for multiple buildings 1.11 Establish the methods of producing drainage drawings for multiple buildings 1.12 Produce working drawings for drainage systems for multiple buildings using ACAD software	
Additional information about the unit		
Unit aim(s)	On completion of this unit, learners will be able to produce designs for drainage systems from multiple buildings	
Unit expiry date	2 Years	
Assessment requirements specified by a sector or regulatory body (if	This unit requires the workplace assessment of occupational competence wherever practicable. For the knowledge and understanding component of the unit, assessment from a	

appropriate)	learning and development environment is allowed.
Name of the organisation submitting the unit	Defence Awarding Organisation
Availability for use	Restricted
Availability for delivery	N/A

URN:	Y/615/7398	
Title:	Large profile roof design and detailing	
Level:	5	
Credit value:	3	
GLH	17	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Apply building technology to large profile roof design tasks	1.1 Identify the requirement for large profile roofs 1.2 Identify the factors that affect large profile roof design 1.3 Identify the requirement to use building technology in roof designs 1.4 Establish roof structure loads. 1.5 Identify terminology used in large profile roof structures 1.6 Identify the factors that govern the pitch of a large profile roof 1.7 Identify terminology used in large profile roof construction 1.8 Identify the characteristics of materials used in large profile roof structures 1.9 Identify the characteristics of large profile roof design 1.10 Identify large profile roof components 1.11 Identify large profile roof construction methods 1.12 Identify the relationship of large profile roofs to adjoining structural elements and components 1.13 Identify the ventilation methods used in large profile roof designs 1.14 Identify the insulation methods used in large profile roof designs 1.15 Identify methods used to provide large profile roof coverings 1.16 Identify methods used to produce openings in large profile roofs 1.17 Identify the technology used to provide fire resistance for large profile roofs 1.18 Identify the technology used to provide large profile roof insulation 1.19 Identify the technology used to resist moisture in large profile roof structures 1.20 Identify the building technology used to provide surface drainage for large profile roofs 1.21 Identify the technology used to improve large profile roof durability 1.22 Identify the approved design information used to	

	construct large profile roof structures 1.23 Establish the factors that affect the selection of large profile roof designs 1.24 Establish methods of interpreting specified large profile roof design information 1.25 Identify the approved design information used to draw large profile roof structures 1.26 Identify methods of interpreting large profile roof design information to produce drawings 1.27 Identify methods of determining large profile roof design information to produce drawings 1.28 Apply building technology information to produce large profile roof drawings
2. Produce large profile roof drawings	2.1 Identify the functions of large profile roofs 2.2 Identify large profile roof classifications 2.3 Identify types of large profile roofs 2.4 Identify components used in large profile roof construction 2.5 Identify materials used for large profile roof construction 2.6 State design criteria for large profile roofs 2.7 Select design information for large profile roofs 2.8 Interpret design information 2.9 Carry out large profile roof design from selected information 2.10 Produce sketches of large profile roofs 2.11 Produce technical drawings of large profile roofs including accurate annotation and in accordance with the specification
Additional information about the unit	
Unit aim(s)	On completion of this unit, learners will be able to carry out roof designs and produce details for construction drawings.
Unit expiry date	2 years
Assessment requirements specified by a sector or regulatory body (if appropriate)	This unit requires the workplace assessment of occupational competence wherever practicable. For the knowledge and understanding component of the unit, assessment from a learning and development environment is allowed.
Name of the organisation submitting the unit	Defence Awarding Organisation
Availability for use	Restricted
Availability for delivery	N/A

URN:	D/615/7399	
Title:	Produce scheme design drawings for sewage treatment works	
Level:	5	
Credit value:	2	
GLH	10	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Produce drawings for sewage treatment works	1.1 Identify the relevant legislation necessary to design a small sewage treatment works 1.2 Identify the Health and Safety requirements in connection with the design, running and maintaining a small sewage treatment works 1.3 Identify the design requirements for cesspools and septic tanks 1.4 Identify the requirements and characteristics for sump and effluent pumps 1.5 Identify the information required to design a small sewage treatment works 1.6 Identify the principle processes of a small sewage treatment works 1.7 Identify the main components of a small sewage treatment works 1.8 Identify and interpret design information from approved references for a small sewage treatment works 1.9 Produce calculations to determine the size of the various components used to make a small sewage treatment works 1.10 Produce schematic layouts for a small sewage treatment works 1.11 Produce scheme design drawings to indicate the layout for a small sewage treatment works	
Additional information about the unit		
Unit aim(s)	On completion of this unit learners will be able to produce scheme design drawings for sewerage treatment works	
Unit expiry date	5 years	
Assessment requirements specified by a sector or regulatory body (if	This unit requires the assessment of occupational competence under realistic conditions wherever practicable. For the knowledge and understanding component of the unit, assessment from a learning and development environment is	

appropriate)	allowed.
Name of the organisation submitting the unit	Defence Awarding Organisation
Availability for use	Restricted
Availability for delivery	N/A

URN:	J/615/7400	
Title:	Produce technical drawings of Non Equipment Bridges	
Level:	5	
Credit value:	3	
GLH	16	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Produce production drawings of non-equipment bridges (NEB)	1.1 Identify the purpose of a non-equipment bridge 1.2 Identify the responsibility for the production of NEB 1.3 Identify the purpose and characteristics of the main components of a NEB deck bridge 1.4 Identify the characteristics of the fixings and fasteners used in NEB production 1.5 Identify the characteristics of bridge piers 1.6 Identify the configuration parameters of NEB designs 1.7 Establish the process of constructing NEB structures 1.8 Identify design information for NEB structures 1.9 Interpret design information 1.10 Identify the safe work procedures required to assemble NEB structures 1.11 Incorporate details of safe working procedures into NEB production drawings 1.12 Produce technical drawings of NEB including accurate annotation and in accordance with the specification	
Additional information about the unit		
Unit aim(s)	This unit is about learners producing drawings for bridges that are not constructed form standard issue military components	
Unit expiry date	2 Years	
Assessment requirements specified by a sector or regulatory body (if appropriate)	This unit requires the assessment of occupational competence under realistic conditions wherever practicable. For the knowledge and understanding component of the unit, assessment from a learning and development environment is allowed.	
Name of the organisation submitting the unit	Defence Awarding Organisation	

Availability for use	Restricted
Availability for delivery	N/A

URN:	L/615/7401	
Title:	Advise on complex draughtsman tasks including capabilities and costs	
Level:	4	
Credit value:	1	
GLH	5	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Advise management on draughtsman capability and development	1.1 Identify factors that affect trade capability 1.2 Identify current trade capability 1.3 Identify trade limitations 1.4 Establish the methods used to identify trade capability and limitations 1.5 Identify current trade capability 1.6 Identify current trade limitations 1.7 Research current trade CPD available to tradesman 1.8 Advise line management on trade limitations and capability 1.9 Advise on CPD available to increase tradesman capabilities	
2. Liaise with task authority	2.1 Identify the need to liaise with task authority 2.2 Identify methods of establishing a point of contact with the task authority 2.3 Identify the means of communicating with the task authority 2.4 Identify the task areas that the tradesman may have to liaise with the task authority 2.5 Identify the process of liaising with the task authority about manpower requirements 2.6 Identify the process of liaising with the tasking authority on task equipment requirements 2.7 Identify the process of liaising with the tasking authority on the duration of the task 2.8 Identify the process of liaising with the task authority on tasking material requirements 2.9 Identify the process of liaising with the tasking authority on issues of task costs	
3. Liaise with other trades	3.1 Identify the need to liaise with other trades 3.2 Identify the role of the Construction Force 3.3 Identify the range of allied trades within the Construction Force 3.4 Establish an overview of the execution of a construction project	

	3.5 Identify methods of establishing a point of contact with the other trades 3.6 Identify the limits of training and responsibilities of other trades relating to own task 3.7 Identify the means of communicating with the other trades 3.8 Identify the process of liaising with other trades during the task 3.9 Identify methods of participating in project meetings 3.10 Identify methods of producing meeting minutes 3.11 Produce meeting minutes in a specified format
Additional information about the unit	
Unit aim(s)	This unit is about a tradesman giving advice to management on trade capabilities, task and costings and liaising with other trades and authorities to plan a task
Unit expiry date	2 Years
Assessment requirements specified by a sector or regulatory body (if appropriate)	This unit requires the assessment of occupational competence under realistic conditions wherever practicable. For the knowledge and understanding component of the unit, assessment from a learning and development environment is allowed
Name of the organisation submitting the unit	Restricted
Availability for use	N/A

URN:	R/615/7402	
Title:	Supervise and mentor design trade staff	
Level:	5	
Credit value:	2	
GLH	12	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Manage personnel during a trade task	1.1 Identify the need to supervise trade task activities 1.2 Identify the responsibilities assigned to positions of rank when supervising trade tasks 1.3 Identify the responsibilities assigned to trade roles when supervising trade tasks 1.4 Identify the limits of role responsibility and ability when supervising trade tasks 1.5 Gather information required to successfully supervise a trade task 1.6 Identify the methods of supervising task activities when supporting own trade personnel 1.7 Identify the methods of supervising tasks with members of the Construction Force 1.8 Identify the methods of supervising overseas tasks involving locally employed civilians 1.9 Supervise trade personnel 1.10 Supervise and coordinate multiple concurrent trade tasks 1.11 Supervise quality control measures for trade personnel	
2. Mentor trade personnel	2.1 Identify the need to mentor trade personnel 2.2 Identify trade related factors that can affect an individual's trade performance 2.3 Identify other factors that can affect an individual's trade performance 2.4 Identify the limits of responsibility and ability to provide mentoring to trade personnel 2.5 Identify the methods used to provide technical support to trade personnel 2.6 Identify other methods of support for trade personnel 2.7 Establish the process of communicating performance concerns to the appropriate point of contact within line management 2.8 Mentor trade personnel	
3. Carry out team / office role	3.1 Identify factors that affect the operation of the design office 3.2 Identify factors that affect the operation of the design team 3.3 Identify information sources contained within the technical reference library 3.4 Identify methods of maintaining design office technical	

	reference library 3.5 Identify the process of managing change control relating to design documentation 3.6 Identify methods to maintain design office operational procedures 3.7 Identify the methods to maintain a safe and sustainable office working environment 3.8 Implement quality control measures
Additional information about the unit	
Unit aim(s)	On completion of this unit learners will be able to mentor other tradesmen employed in the design trades, and supervise those persons during a design task.
Unit expiry date	2 Years
Assessment requirements specified by a sector or regulatory body (if appropriate)	This unit requires the assessment of occupational competence under realistic conditions wherever practicable. For the knowledge and understanding component of the unit, assessment from a learning and development environment is allowed.
Name of the organisation submitting the unit	Defence Awarding Organisation
Availability for use	Restricted
Availability for delivery	N/A

URN:	Y/615/7403	
Title:	Use computer aided design (CAD) software	
Level:	3	
Credit value:	9	
GLH	83	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Use 2 dimensional (2D) CAD system	1.1 Identify the requirement to use 2D CAD software 1.2 Identify 2D CAD system hardware 1.3 Identify 2D CAD system software 1.4 Identify the methods of setting up CAD system to produce drawings 1.5 Identify the methods of configuring CAD system devices 1.6 Identify file management commands to manage 2D CAD files 1.7 Identify the features of a 2D CAD interface 1.8 Identify the methods of drawing lines using CAD 1.9 Identify the methods of drawing shapes using CAD 1.10 Identify the methods of creating lines with multiple vertices using CAD 1.11 Identify the methods of carrying out editing routines using CAD. 1.12 Produce 2D drawings using CAD 1.13 Identify methods to manipulate 2D CAD user coordinate system commands to manage system 1.14 Identify methods of saving CAD drawings 1.15 Save CAD drawing files	
2. Generate plots	2.1 Identify the use of plots in drawing tasks 2.2 Identify plotting equipment 2.3 Identify the operating modes of the plotting equipment 2.4 Identify plotting materials and consumables 2.5 Identify user checks and maintenance for plotting and associated equipment 2.6 Identify methods of generating plot information 2.7 Generate accurate plots	
3. Use Blocks and Attributes within CAD drawings	3.1 Identify the purpose of blocks and attributes 3.2 Identify block and attributes commands and options 3.3 Identify methods of using block and attributes 3.4 Use block and attributes 3.5 Identify methods of saving block and attributes 3.6 Save blocks and attribute	

4. Use layers within drawings	4.1 Identify the purpose of layers 4.2 Identify the process to set up layers within drawings 4.3 Identify layer controls and commands 4.4 Identify methods of using layer controls and commands 4.5 Produce a drawing using multiple layer management
5. Use Inquiry commands	5.1 Identify the purpose of the Inquiry function to analyse drawing detail 5.2 Identify Inquiry controls and commands 5.3 Identify methods of using Inquiry function 5.4 Identify the process to set up user commands to carry out Inquiry commands 5.5 Use Inquiry function to calculate drawing detail 5.6 Identify methods of saving Inquiry information 5.7 Save Inquiry information
6. Use Editing commands	6.1 Identify the requirement to modify drawing information using editing commands 6.2 Identify editing commands 6.3 Identify methods of using editing commands 6.4 Use editing commands to edit drawing information 6.5 Use editing commands to modify text within a drawing
7. Use Display commands	7.1 Identify the use of display commands to depict CAD detail 7.2 Identify Display controls and commands and options 7.3 Identify the methods of using display commands 7.4 Use display commands to change drawing display
8. Insert dimensions to drawings	8.1 Identify dimensions controls and commands 8.2 Identify the methods used to add dimensions to drawings 8.3 Insert dimensions onto a CAD drawing
9. Produce drawn elements using CAD	9.1 Identify the requirement to draw elements using CAD 9.2 Identify the commands required to draw elements using CAD 9.3 Identify the methods used to produce drawn elements 9.4 Use commands to produce drawn elements
10. Incorporate 3D views within a drawing	10.1 Identify the use of 3D views in drawings 10.2 Identify 3D CAD system hardware 10.3 Identify 3D CAD system software 10.4 Identify the methods of setting up a 3D CAD system 10.5 Identify the features of a 3D CAD system interface 10.6 Identify 3D CAD system drawing commands 10.7 Identify 3D CAD file management commands 10.8 Identify the method of producing 3D shapes using solid modelling techniques 10.9 Identify methods of producing 3D shapes/models using 3D CAD 10.10 Identify the methods of using Boolean function to multiply or subtract drawing objects 10.11 Identify the methods of editing 3D objects 10.12 Identify methods of rendering 10.13 Use render functions to create images

	10.14 Identify CAD view commands to display 3D features 10.15 Identify the methods of viewing 3D models in display modes 10.16 Identify methods of using the CAD solid modelling controls to develop 3D models 10.17 Identify the methods of producing 3D model views using 3D CAD 10.18 Produce 3D views using 3D CAD 10.19 Identify the methods of exporting 3D CAD data 10.20 Manage 3D CAD data 10.21 Identify methods of saving 3D views to a drawing 10.22 Use commands to save 3D drawing views
11. Create CAD construction drawings	11.1 Identify the requirement to create CAD construction drawings 11.2 Identify the type of construction drawings produced using CAD 11.3 Set up CAD system to produce construction drawings 11.4 Select the appropriate scale required for construction drawing task 11.5 Produce construction drawings using CAD 11.6 Print construction drawings using CAD commands 11.7 Identify methods to save construction drawings using CAD commands 11.8 Save construction drawings using CAD commands
12. Remedy CAD operating faults	12.1 Identify initial response to loss of system functionality 12.2 Identify methods of self-diagnosing loss of CAD system functionality 12.3 Identify external help options to reinstate CAD system functionality 12.4 Reinstate CAD system functionality
Additional information about the unit	
Unit aim(s)	On completion of this unit, learners will be able to use CAD software to carry out draughtsman tasks.
Unit expiry date	2 Years
Assessment requirements specified by a sector or regulatory body (if appropriate)	This unit requires the assessment of occupational competence under realistic conditions wherever practicable. For the knowledge and understanding component of the unit, assessment from a learning and development environment is allowed.
Name of the organisation submitting the unit	Defence Awarding Organisation
Availability for use	Restricted

Availability for delivery	N/A

URN:	D/615/7404	
Title:	Produce Contract drawings	
Level:	5	
Credit value:	2	
GLH	12	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Produce contract drawings	1.1 Identify the requirement for contract drawings 1.2 Identify methods of gathering information to produce contract drawings 1.3 Identify methods of interpreting information to produce contract sketches / drawings 1.4 Establish required information to produce sketches of building / structure 1.5 Produce contract sketches of building services 1.6 Produce contract diagrams of building services including accurate annotation and in accordance with the specification 1.7 Produce contract drawings including accurate annotation and in accordance with the specification	
Additional information about the unit		
Unit aim(s)	On completion of this unit learners will be able to produce contract drawings	
Unit expiry date	2 Years	
Assessment requirements specified by a sector or regulatory body (if appropriate)	This unit requires the assessment of occupational competence under realistic conditions wherever practicable. For the knowledge and understanding component of the unit, assessment from a learning and development environment is allowed.	
Name of the organisation submitting the unit	Defence Awarding Organisation	
Availability for use	Restricted	
Availability for delivery	N/A	

URN:	H/615/7405	
Title:	Produce drawings for reinforced concrete raft foundations and stairs	
Level:	4	
Credit value:	3	
GLH	16	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Produce construction drawings of Reinforced Concrete (RC) elements for stairs and raft foundations	1.1 Identify the requirement to reinforce concrete to resist forces 1.2 Identify the characteristics of materials used to reinforce concrete 1.3 Identify the methods used to reinforce concrete elements. 1.4 State the methods for correctly positioning reinforcing elements within areas of stress 1.5 Identify the processes used to produce reinforced concrete stairs and raft foundations 1.6 Establish factors that affect the design of reinforced concrete stairs and raft foundations 1.7 Identify approved documentation used to develop RC stairs and raft foundation drawings 1.8 Interpret approved documentation to develop RC stairs and raft foundation drawings 1.9 Identify appropriate drawing symbols for use in RC stairs and raft foundations concrete drawings 1.10 Identify methods of depicting construction detail in drawings 1.11 Identify requirement to produce RC concrete schedules 1.12 Identify methods of producing RC concrete schedules 1.13 Produce RC schedules for concrete reinforcement task 1.14 Produce sketches of reinforced concrete elements 1.15 Produce technical drawings of concrete reinforcement for stairs and raft foundations including accurate annotation and in accordance with the specification	
Additional information about the unit		
Unit aim(s)	On completion of this unit, learners will be able to produce construction drawings of reinforced concrete (RC) stairs and raft foundations.	
Unit expiry date	2 years	
Assessment	This unit requires the workplace assessment of occupational	

requirements specified by a sector or regulatory body (if appropriate)	competence wherever practicable. For the knowledge and understanding component of the unit, assessment from a learning and development environment is allowed.
Name of the organisation submitting the unit	Defence Awarding Organisation
Availability for use	Restricted
Availability for delivery	N/A

URN:	K/615/7406	
Title:	Produce drawings for sanitation works	
Level:	4	
Credit value:	2	
GLH	13	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Produce working drawings for sanitation works (above ground drainage systems)	1.1 Identify the characteristics of sanitation works for multiple and multi-storey buildings 1.2 Identify the design requirements for sanitation systems for multi-storey and multiple buildings 1.3 Identify regulations in regards to the design of sanitation systems 1.4 Gather design information that complies with regulations for sanitation systems 1.5 Identify the drawing conventions for producing working drawings of sanitation systems 1.6 Identify the annotation required to produce working drawings of sanitation systems 1.7 Identify the layout and components used in sanitary systems for multi-storey and multiple buildings 1.8 Identify the methods of confirming capacities of soil stacks 1.9 Establish the methods of producing working drawings for sanitation systems 1.10 Produce working drawings for sanitation systems for multi-storey and multiple buildings	
Additional information about the unit		
Unit aim(s)	On completion of this unit, learners will be able to produce drawings for sanitation works	
Unit expiry date	2 Years	
Assessment requirements specified by a sector or regulatory body (if appropriate)	This unit requires the workplace assessment of occupational competence wherever practicable. For the knowledge and understanding component of the unit, assessment from a learning and development environment is allowed.	
Name of the organisation	Defence Awarding Organisation	

submitting the unit	
Availability for use	Restricted
Availability for delivery	N/A

URN:	M/615/7407	
Title:	Produce working drawings of culverts	
Level:	4	
Credit value:	1	
GLH	8	
Learning outcomes The learner will:	Assessment criteria The learner can:	
1. Produce culvert production drawings	1.1 Identify the purpose of a culvert 1.2 Establish the design characteristics of culverts 1.3 Identify the purpose and composition of the main components of a culvert 1.4 Identify the properties of the materials used to construct a culvert 1.5 Establish the installation methods used in the construction of a culvert 1.6 Establish the discharge performance for catchment area 1.7 Identify the methods of calculating the performance of a drainage arrangement 1.8 Establish the performance requirement of a culvert 1.9 Identify design information for culverts 1.10 Interpret design information 1.11 Produce technical drawings of culverts including accurate annotation and in accordance with the specification	
Additional information about the unit		
Unit aim(s)	On completion of this unit, learners will be able to produce drawings for culverts	
Unit expiry date	2 Years	
Assessment requirements specified by a sector or regulatory body (if appropriate)	This unit requires the assessment of occupational competence under realistic conditions wherever practicable. For the knowledge and understanding component of the unit, assessment from a learning and development environment is allowed.	
Name of the organisation submitting the unit	Defence Awarding Organisation	

Availability for use	Restricted
Availability for delivery	N/A