MILITARY ENGINEERING CONSTRUCTION TECHNICIAN

LEVEL 3

END POINT ASSESSMENT PLAN

Introduction

This document sets out the requirements for end-point assessment (EPA) for the Military Engineering Technician Level 3, which sets out the assessment for three distinct pathways:

- Carpenter & Joiner
- Bricklayer & Concreter
- Building & Structural Finisher

Full time apprentices will typically spend a minimum of 14 months on-programme working towards the apprenticeship standard, with a minimum of 20% off-the-job training

The EPA should only start once the employer is satisfied that requirements for EPA have been met and can be evidenced to an EPA organisation, one that is in the Education and Skills Funding Agency's (ESFA) Register of end point assessment organisations (RoEPAO), and that the apprentice is consistently working at or above the level set out in the standard.

A **Carpenter & Joiner** will be required to undertake a number of roles that include combat engineering covering bridge building, demolitions and the construction of field defenses as well as undertaking the role of a carpenter and joiner who is required to undertake professional building tasks such as first and second fixings, fitting door and window furniture and erecting structural supports. The examples given above are just a few of the requirements of this apprentice.

A **Bricklayer & Concreter** will be required to undertake a number of roles that include combat engineering covering bridge building, demolitions and the construction of field defenses as well as undertaking the role of a bricklayer and concreter who is required to undertake professional building tasks such brickwork, foundations, setting out, scaffolding and concreting. The examples given above are just a few of the requirements of this apprentice.

A **Building & Structural Finisher** will be required to undertake a number of roles that include combat engineering covering bridge building, demolitions and the construction of field defenses as well as undertaking the role of a building and structural finisher who is required to undertake professional building tasks such as glazier, roofer, tiler, plasterer, dry liner and floor finisher. preparing surfaces to enable painting and other treatment for preservation, hygiene, decoration, identification and camouflage. The examples given above are just a few of the requirements of this apprentice.

This apprenticeship incorporates on-programme academic and workplace learning and assessment with an independent end-point assessment to test the knowledge, skills and behaviors of the standard. It will typically take between 12 and 18 months to complete the necessary training, with the EPA taken after the apprentice has successfully completed their mandatory Phase 1, combat training, as well as Phase 2A and Phase 2B combat engineering

and trade training which will typically be at the 14 month point.

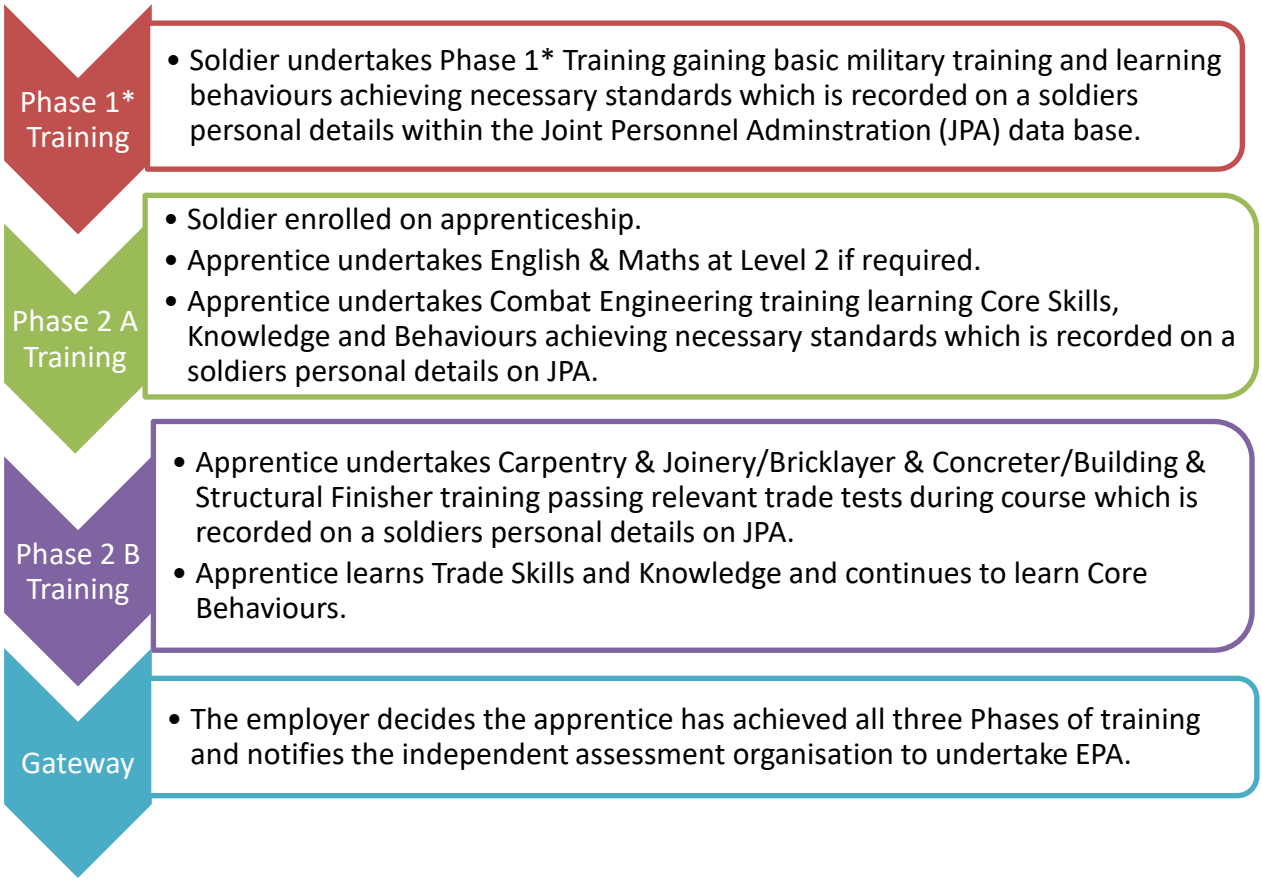
The apprentice must have already achieved Level 2 Standard for English and Mathematics prior to the EPA.

The EPA consists of two distinct methods:

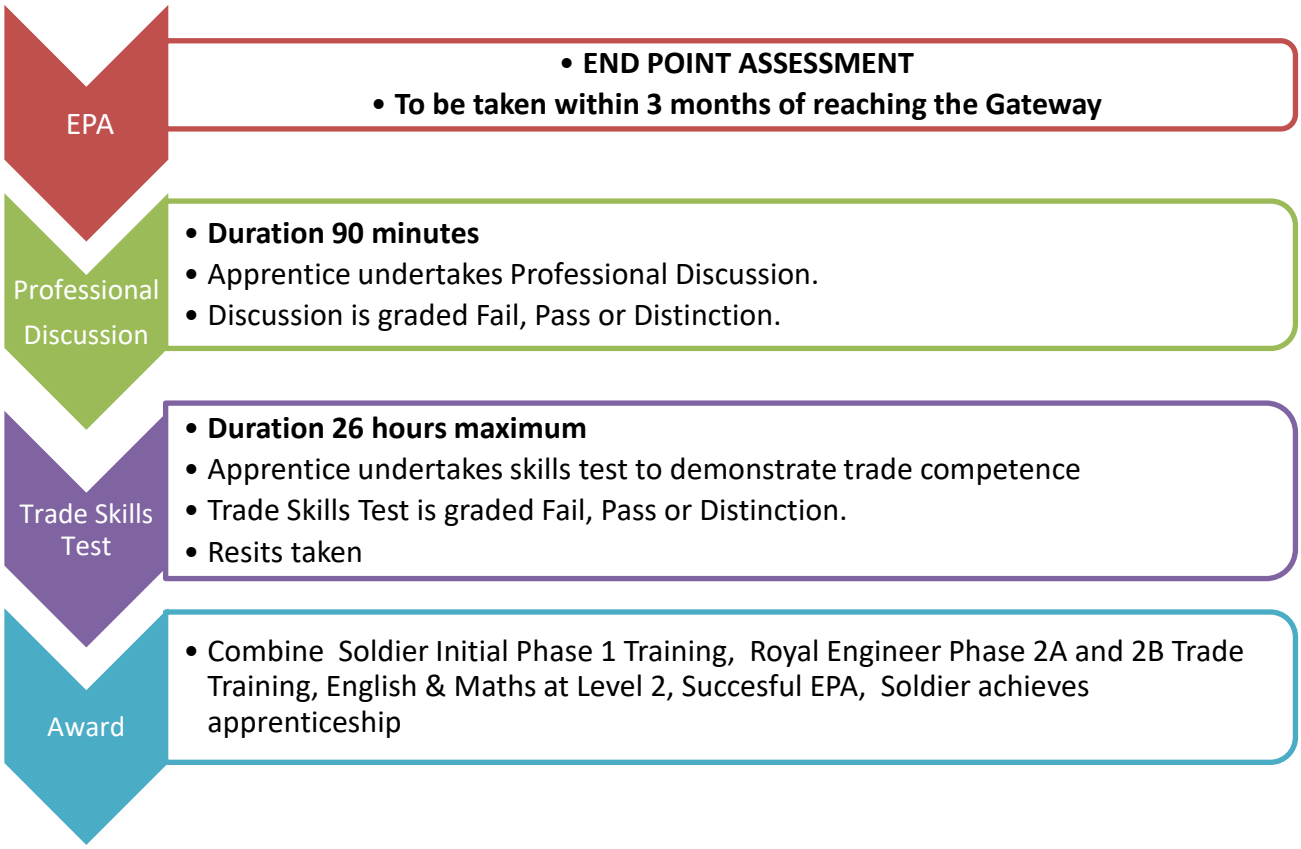
- Professional Discussion
- Skills Test

Performance in the EPA will determine the apprenticeship grade of fail, pass or distinction.

Summary of End-Point Assessment



*Phase 1 training is pre apprenticeship and is covered in the entry requirements



END POINT ASSESSMENT GATEWAY

The EPA should only start once the employer is satisfied that the requirements for EPA have been met and can be evidenced to an end-point assessment organisation; and that the apprentice is consistently working at or above the level set out in the standard.

Requirements

- All apprentices must have achieved the necessary standards during Phase 1 training prior to being registered for an apprenticeship.
- All apprentices must achieve the following standards/qualifications during the on-programme assessment:
    1. English Level 2
    2. Mathematics Level 2
    3. Completed Phase 2A training
    4. Completed Phase 2B training
- End Point Assessment will be triggered by the mandated achievement of the listed on-program requirements (1-4). These will all be recorded on a soldier's personal record as part of JPA.

The employer will decide if the learner has demonstrated the necessary knowledge, skills and behaviour during the on-programme learning so that they are ready to access the End Point Assessment.

THE END POINT ASSESSMENT

The apprentice will be assessed on their ability to demonstrate the skills, knowledge and behaviours in one of the following pathways through two assessment opportunities:

- Military Engineering Construction Technician (Carpenter & Joiner)
- Military Engineering Construction Technician (Bricklayer & Concreter)
- Military Engineering Construction Technician (Building & Structural Finisher)

The assessment will be undertaken in the following sequence:

- Professional Discussion
- Skills Test

The apprentice must achieve a minimum of a pass in both assessments in order to pass the overall apprenticeship.

ASSESSMENT 1: PROFESSIONAL DISCUSSION

Duration: 90 minutes – +/- 10% at the discretion of the independent assessor

The purpose of the professional discussion is to provide an opportunity for the apprentice to demonstrate the required knowledge, skills and behaviours, (KSB). Each pathway will cover the 14 KSB shown in Annex A as Core Knowledge and Skills along with aspects indicated under each Pathway for Professional Discussion. Questions will be a mix of competency based questions relevant to the Pathway chosen (talking about things they have done) and scenario based questions (talking about what they would do in a fictitious military scenario). The Discussion can be recorded for verification purposes.

The professional discussion will be conducted by an independent assessor from the end point assessment organisation on a one-to-one basis in a controlled environment free from distraction or influence. The apprentice will be asked 10 standardised questions. Questions will be an equal mix of scenario and competency based questions, synoptic in design so that each assess more than one knowledge, skill or behaviour statement. Follow-up questions may be asked so that the assessor can satisfy him/herself of the depth of the KSBs. The list of questions must be pre-selected by the independent assessor to ensure sufficient coverage of the KSBs required as per Annex A.

Scenario question example: *You are on patrol with 4 other NCOs/Sappers when an IED is set off resulting in casualties. The NCO has a severed leg below the knee, but is conscious. A Sapper has shrapnel wounds to the face and cheek but is also conscious. A Sapper is unconscious with undetermined wounds. The final Sapper is conscious but confused. You must take charge to administer first aid. Having determined there is no other risk of IED, explain the sequence of casualties you would treat and what first aid action you would take.*

Competence question example: *Tell me about a time when you delivered drinkable water from raw source involving filtration and along with the risks you took into account when doing so.*

End-point assessment organisations must develop a bank of at least 50 questions, equally split between scenarios and competency questions, to ensure sufficient variation. The bank of questions must be refreshed at least every two years. It is the responsibility of the EPAO to develop a bank of questions to prevent predictability within the test and they must ensure any apprentice undertaking a resit is not asked the same question as in the first test. All questions developed by the EPAO must done so in conjunction with military

employers. EPAOs will ensure the confidentiality of questions developed with input from military employers.

ASSESSMENT 2: SKILLS TEST

Duration: 24 hours

The purpose of the skills test is to provide an opportunity for the apprentice to demonstrate knowledge, skills and behaviours relating to their specific trade pathway. The skills test will be used to confirm that the apprentice is able to plan, resource, organize and undertake a project to the required standards, following a drawing and using the appropriate resources within a stated time.

EPA organisations are free to develop their own assessment designs but they must include the requirements identified below. The test must take place in a controlled, simulated environment.

Preliminary activities: (2 hours)

The apprentice must be provided with written and verbal instructions on the tasks they must complete regarding the design, the resources available and the timing involved and where the relevant structure should be built. Preliminary activities required of the apprentice will include:

- The reading and confirmation of understanding the design that will be supplied by the assessor.
- The selection of the relevant Personal Protective Equipment, (PPE).
- The identification of the position for structure to be built or surfaces to be applied.
- The identification and selection all the relevant resources needed to undertake the building of the structure or the surfaces to be applied.
- The identification and selection of the relevant tools needed.
- A risk assessment of the working site and surrounding area.

Skills Test (3 days x 8 hours maximum; apprentices may complete earlier)

Apprentices will construct or lay specific surfaces in accordance with the plan issued by the assessor, using the necessary tools and resources as well as adhering to all the relevant health and safety requirements including the use of the correct PPE at all times.

Apprentices will be observed by an independent assessor qualified within the Pathway being assessed. It is expected that a minimum of 2 and a maximum of 5 apprentices on the same Pathway will be assessed simultaneously.

The assessment will take place at a venue which has been approved by the End-point assessment organisation prior to the assessment taking place. This will require apprentices to share larger tools and equipment, enhancing the opportunity to assess planning, organisation, safety, communications and working with others.

Each skills test will be measured by the amount of tolerances achieved by the apprentice for their respective trade.

The following are the minimum requirements for the apprentices to achieve:

Carpenter & Joiner

Build a structure to include a wall, floor, door, and window

Time allowed: 24 Hours

The task is to build a 2400cm x 2400cm (+/- 10% at discretion of the independent assessor) structure using appropriate timber and including a raised floor, a door and a window. The exact specifications should be detailed in drawings provided to the apprentice prior to the assessment. The floor must be supported by beams and contain accurate joints. The structure must be plumb and secure with no hanger marks, dents or abrasions. There will be a need to use the transportable cutting and shaping tools in a safe manner. Once the frame is completed the flooring is to be laid and door fitted that is square and free from any binding. Three hinges will be used along with other furniture. There will also be a need to fit cladding appropriately and fit the window. There will also be a need to fit architrave and service encasement, all to the specifications shown in the drawing. The site must be kept clean and tidy and all work undertaken in a safe manner to both self and fellow workers.

Bricklayer and Concreter

Build a Brick Pier, a Cavity Wall with Window and Lay a concrete Path

Time allocated: 24 Hours

Build a 1 ½ brick pier, 327cm x 327cm x 600cm (+/- 10% at the discretion of the independent assessor). The exact specifications should be detailed in drawings provided to the apprentice prior to the assessment, which should cover techniques of plumbing, ranging, levelling, gauging & setting out measuring to the required sizes. This should be followed by the building of a cavity wall, 2240cm x 890cm with the wall that will include a window, up to Damp Proof Course (DPC). The cavity wall will include a window aperture along with the need to fit a steel lintel maintaining a regular joint thickness. Finally lay a concrete pathway, 1500cm x 500cm x 150cm, mixing the cement and ballast to a ratio of 1:5. The formwork will be lined with Damp Proof Membrane (DPM) prior to pouring. The path surface finish will need to be 3 equal sections demonstrating the ability to float, brush and trowel finish the path.

Building & Structural Finisher

Ceramic Floor Tiling, Painting, Ceramic Wall Tiling

Time allocated: 24 hours

The apprentice will use a rig built by the C&J apprentice. A clean, washable, hard wearing floor with a decorative finish is required in a bathroom. Install ceramic floor tiles to a

professional standard, setting out the tile floor as specified by drawings provided in advance of the assessment. The floor is to be grouted and left clean. Tiles must be fixed with the appropriate tile adhesive and be spaced using 5mm tile spacers. Apply a coat of sealer to the areas to be tiled prior to commencing.
Tiles to be 1mm from the wall around the box column and trims are to be fitted correctly. Following this prepare and paint a variety of surfaces to a professional standard using the following skills, preparing surfaces for painting along with tools, equipment and paint for painting. Apply different types of paint by brush and roller. After painting clean tools and equipment and store correctly. Walls will have 2 coats of matt emulsion applied using brush and roller. Door frame, window frame and skirting will be prepared for painting and 1 coat of acrylic undercoat will be applied followed by 1 coat of acrylic gloss using a brush. Ensure paint is prepared using the correct equipment prior to application and protect floor area from paint splashes using dustsheets. Finally, install ceramic wall tiles to a professional standard, set out and tile a wall as specified by plans. It will include 2 sacrificial shapes to show the skills relating to cuts and will involve the inclusion of tile trims. Tiles must be grouted to a professional standard. Tiles must be fixed with the appropriate tile adhesive and be spaced using 5mm tile spacers and prior to commencing a coat of sealer is to be applied to the areas to be tiled. Tiles to be applied to a height of 1m ensuring the box column is included tile trims are to be used and fitted correctly.

GRADING

For the **professional discussion**, apprentices will receive a score of 0 (fail), 1 (pass) or 2 (distinction) for each answer. It is not necessary to 'pass' every question in order to pass this assessment, but points are allocated in such a way that if an apprentice provides a fail answer to one question, he or she will need to provide a distinction answer to another question in order to accumulate enough points to receive an overall pass for this method. Assessors should ask one follow-up question which should be based on the initial answer given: if the apprentice provides an initial fail answer, the follow-up question should be based on the requirements to gain a pass; if the apprentice provides an initial pass answer, the follow-up question should be based on the requirements to gain a distinction.

The final mark in the **skills test** should be based on the number of tolerances met. For each practical test there are 79 individual tolerances requiring assessment. Assessment organisations are free to design their own assessments based on these tolerances, which can be varied in design to avoid predictability.

Individual elements:

End Point Assessment Element	Fail	Pass	Distinction
Professional Discussion Individual answers scored as follows: Fail = 0 Points Pass = 1 Point Distinction = 2 Points	**0-9 Points** Unable to demonstrate evidence or knowledge of the correct procedures to be followed in a given task or scenario. Unable to demonstrate an understanding of the tactical context of a given task or scenario.	**10-15 Points** Able to explain the correct procedure to be followed for a given task, example or scenario. Demonstrates an understanding of the tactical context of a given task or scenario. Demonstrates an ability to follow correct procedures without support.	**16-20 Points** Shows an understanding of the range of options available in a given situation, and a considered rationale for the specific option chosen. Shows initiative and demonstrates an ability to contribute positively beyond set procedures, showing leadership and a willingness to take control of situations when appropriate.
Skills Test 1 point = 1 tolerance met	**0 – 61 Points**	**62 – 70 Points**	**71 – 79 Points**

Overall apprenticeship grading:

Apprentices must pass both elements of the EPA in order to achieve an overall pass. An overall distinction can only be awarded if the apprentice achieves a distinction in the skills test and at least a pass in the professional discussion.

Professional Discussion	Fail	Fail	Pass	Pass	Distinction	Pass	Distinction
Skills Test	Fail	Pass	Fail	Pass	Pass	Distinction	Distinction
Overall Grade	**Fail**	**Fail**	**Fail**	**Pass**	**Pass**	**Distinction**	**Distinction**

RE-SITS AND RE-TAKES

Apprentices who fail one or more EPA method will be offered the opportunity to take a re-sit or re-take of that particular method. Re-sits and re-takes are only necessary for the specific method failed – it is not a requirement to re-sit or re-take the entire EPA. A re-sit does not require further learning, whereas a re-take does. Re-sits must not be available to apprentices wishing to move from pass to distinction. The apprentice's employer will need to agree that a re-sit/re-take is an appropriate course of action.

The apprentice must have a supportive action plan to prepare for the re-sit/re-take.

An individual EPA method re-sit/re-take must be taken during the maximum EPA period within 3 months of the original test, otherwise the entire EPA must be retaken.

The maximum grade awarded to a re-sit/re-take will be pass, unless the EPAO identifies exceptional circumstances accounting for the original fail.

PROFESSIONAL BODY RECOGNITION

The standards laid out for this apprenticeship are recognized by Construction Industry Training Board (CITB) and therefore successful completion of the EPA entitles the apprentice to apply for the relevant CSCS card enabling them to work on civilian construction sites.

QUALITY ASSURANCE: INTERNAL

Independent Assessors must be occupational competent and competent to assess. Each apprentice should have the same assessor across both assessment methods. Assessors must meet the following requirements:

- Have at least five years' post-qualification experience within the industry relevant to the pathway being assessed.
- Hold a CSCS card relevant to the pathway being assessed.
- Undertake CPD each year to confirm their technical knowledge understanding of their trade.
- Must be working towards or have achieved a relevant assessors qualification such as a L3 Certificate in Assessing Vocational Achievement or equivalent
- Have no previous contact with the apprentice prior to the EPA.

End-Point Assessment organisations must also:

- Be on the ESFA's register of End Point Assessment Organisations (RoEPA)
- Ensure assessors make consistent and reliable assessment and grade judgements through moderation during twice-yearly meetings, a minimum of 10% of each assessors judgements will be moderated at each meeting.
- Recruit and manage the assessors and provide them with CPD (particularly how to deliver professional discussions)
- Operate an appeals process.
- Consult with relevant military training experts to ensure that question banks for the professional discussion are in tune with present phase 1 & 2 training for apprentices.
- Conduct standardisation exercises for assessors to ensure consistent marking of scenarios and guidance when problems occur.

QUALITY ASSURANCE: EXTERNAL

External quality assurance of the EPA will be managed by CITB.

FINAL JUDGEMENT

The end point assessment organisation, advised by the independent assessor, has the final judgement as to whether the apprentice has passed the EPA. This decision is based upon the outcome of the results of the professional discussion and the skills test in line with the set grading criteria.

IMPLEMENTATION

The EPA will cost no more than 20% of the overall cost of the apprenticeship, which has a funding band of £5,000.

Independent assessors must attend at least two meetings per year, arranged and managed by the assessment organisation, in order to ensure consistency in approach and a standard interpretation of assessment is applied.

Based on apprenticeship patterns it is expected that there will be 40 – 50 apprentices passing through the assessment gateway each year for each pathway.

Annex A to
MILITARY ENGINEERING CONSTRUCTION TECHNICIAN ALL OPTIONS

LEVEL 3

END POINT ASSESSMENT PLAN

MAPPING EXERCISE FOR EVIDENCE GATHERING

Key	Assessment Method
PD	Professional Discussion
ST	Skills Test

MILITARY ENGINEERING CONSTRUCTION TECHNICIAN CARPENTER AND JOINER

Generic Core Knowledge	Assessment Method	
the importance of site safety whilst being aware of the role of other site workers and their welfare.		**ST**
the principles of waste management, disposal and environmental control in relation to environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations, official guidance and local requirements when working in foreign countries.		**ST**
the different techniques and methods used to move, handle and store resources in the workplace and be aware of potential hazards involved with these resources.		**ST**
health and safety requirements for control equipment when undertaking work on site along with accident reporting when involved with, fires, spillages, injuries.		**ST**
safety requirements when working at height and below ground using relevant equipment .		**ST**
the purpose of the work programme and why deadlines should be kept to in relation to progress charts, timetables and estimated times.	**PD**	
the importance of construction site reporting procedures and how changes in circumstances will impact on the works programme timetable.		**ST**
the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they can be implemented.	**PD**	

organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, unit, operative.		**ST**
complex first aid procedures in an emergency.	**PD**	
safety and load bearing rules when constructing bridges to cross gaps of various sizes using existing materials and prefabricated sections.	**PD**	
safety aspects and rules regarding the use of explosive and delivery of basic demolitions.	**PD**	
environmental and health aspects needed for providing water supply to a given location including water storage.	**PD**	

Generic Core Skills	**Assessment Method**	
carry out work to military standards, as laid down by the on-site military design team. All works must be of quality, within budget.		**ST**
interpret information provided in drawings, specifications, schedules, method of statements, risk assessments, Manufacturers' information and industry regulations governing construction.		**ST**
calculate quantity in relation to tools, resources, time, area and wastage associated with the work being undertaken.		**ST**
undertake basic project management process to include the bidding for necessary resources across long logistic chains, whilst avoiding wastage and all to be completed within the required time frame.	**PD**	
undertake site supervision to ensure completion of task in a military (often hostile) environment , maintaining health and safety and a safe working environment.	**PD**	
move, manage and store resources in the workplace in a safe manner.		**ST**

liaise with fellow workers, allied forces and outside agencies to meet local import/legislative requirements required when working in a foreign country.	**PD**	
plan the sequence of work, using appropriate resources, in accordance with organisational procedures to ensure work is completed safely and efficiently.		**ST**
complete relevant documentation necessary to comply with local building regulations.	**PD**	
demonstrate complex First Aid procedures likely to save life in a given situation.	**PD**	
oversee the preparation of resources safely for transport by land, sea or air and safely unload resources with the use of signalling.	**PD**	
undertake core military combat engineering skills including: • develop protective shelters including trench construction being aware of the relevant safety aspects of working below ground. • construct bridges to cross gaps of various sizes using improvised existing materials as well as prefabricated modular bridge components. • use explosives to undertake basic demolitions. • be able to construct a water supply system from a raw source (such as a river) utilising engineering skills to provide water storage and delivery.	**PD**	
use personal protective equipment relevant to the task and the tactical situation.		**ST**
communicate effectively to the rest of the team and with management.	**PD**	**ST**
adapt to the environment in which they are working.		**ST**

Carpenter and Joiner Role Knowledge	**Assessment Method**	
Will require a comprehensive understanding of the techniques of setting up and using of transportable cutting and shaping		**ST**

machines in the workplace.		
Will require a comprehensive understanding of first fixing components in the workplace including frames (door and/or window), linings (door and/or hatch), floor joist coverings (or flat roof decking), partitions (straight).		**ST**
Will require a comprehensive understanding of second fixing components in the workplace including side hung doors, mouldings (standard architrave, skirting), ironmongery, service encasement, wall and floor units/fitments, cladding.		**ST**
Will require a comprehensive understanding of measuring, marking out, fitting, finishing, positioning and securing.		**ST**
Will require a comprehensive understanding of characteristics, quality, uses, sustainability, limitations and defects associated with timber and timber based products and components, such as hardwood, softwood, MDF and other materials.	**PD**	
Will require a comprehensive understanding of safe work practices when using tools, resources and equipment in a manner not likely to cause injury should they trip and fall.		**ST**
Will require a comprehensive understanding of working with tools away from the body to avoid injury.		**ST**
Will require a comprehensive understanding of what safety guards should be in place in accordance with machine instructions.		**ST**
Will require a comprehensive understanding of the correct selection of accessories for machines and the work being undertaken.		**ST**
Will require a comprehensive understanding of identifying the correct maintenance requirements for accessories and how to report defects.	**PD**	
Will require a comprehensive understanding of the characteristics, quality, uses, sustainability, limitations and defects associated with resources such as timber, timber boarding, manufactured sheet material, plastics, doors, mouldings, ironmongery, metals, frames, linings, wall and floor units/fitments, adhesives, sealants, fixings, associated ancillary items, hand and/or power tools and equipment.	**PD**	
Will require a comprehensive understanding of safe working practices and procedures and how to report problems when working on site undertaking numerous procedures.	**PD**	
Will require a comprehensive understanding of the specific hazards associated with carpentry and joinery resources and methods of work.	**PD**	

Carpenter and Joiner Role Skills	Assessment Method	
Will be able to select resources necessary to undertake a task which will include materials, components and fixings, tools, equipment and accessories.		**ST**
Will be able to protect the work and its surrounding area whilst minimising damage and maintain a clean work space.		**ST**
Will be able to prepare timber and timber structures to be included in engineering projects. This will include the ability to measure, mark out, fit, fix, position and secure fittings.		**ST**
Will be able to set up and use transportable cutting and shaping machines in the workplace.		**ST**
Will be able to demonstrate compliance with given information and relevant legislation in relation to the safe use of access equipment, safe handling of materials, safe use and storage of materials, tools, equipment and ancillaries.	**PD**	**ST**
Will be able to use, maintain and store materials, hand tools, portable power tools and ancillary equipment in a safe manner.		**ST**
Will be able to set up and use safely drills, planes, biscuit joiners and disc cutters.		**ST**
Will be able to set up and use safely cutting tools including saws such as: circular, chop, mitre, bench, jig, reciprocating, alligator and scroll saws.		**ST**
Will be able to set up and use wood shaping tools including a thicknesser, sander (orbital, belt, disc), router, laminate trimmer, and grinder to given working instructions.		**ST**
Will be able to install first fixing components according to instructions in the workplace including frames (door and window), door linings, floor joist coverings, partitions (straight).		**ST**
Will be able to install second fixing components in the workplace including measuring, marking out, fitting, finishing, positioning, securing side hung doors, mouldings (standard architrave), ironmongery, service encasement, wall and floor units/fitments, and cladding.		**ST**
Will be able to construct field defences (i.e. trench work and sangers) using necessary wood reinforcing to strengthen the structure in the form of frameworks and shuttering.	**PD**	
Will be able to manufacture wooden shoring in unstable buildings to render buildings safe for temporary occupation.	**PD**	

General Role Behavioural Requirements	Assessment Method	
Will be able to demonstrate an alert and tactical awareness prior to, during and after any construction project in a hostile environment and be able to adapt to a changing environment.	**PD**	
Will be able to demonstrate the willingness to take charge of a situation should it be required.	**PD**	
Will be able to demonstrate the initiative to adapt, develop and overcome any situation that may arise during a task whilst maintaining a military approach.	**PD**	
Will be able to demonstrate a responsible attitude towards own and others safety in the workplace.	**PD**	**ST**
Will be able to demonstrate a strong Team spirit and Corps values	**PD**	**ST**

MILITARY ENGINEERING CONSTRUCTION TECHNICIAN BRICKLAYER & CONCRETER

Key	Assessment Method
PD	Professional Discussion
ST	Skills Test

Generic Core Knowledge	Assessment Method	
the importance of site safety whilst being aware of the role of other site workers and their welfare.		**ST**
the principles of waste management, disposal and environmental control in relation to environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations, official guidance and local requirements when working in foreign countries.	**PD**	**ST**
the different techniques and methods used to move, handle and store resources in the workplace and be aware of potential hazards involved with these resources.		**ST**
health and safety requirements for control equipment when undertaking work on site along with accident reporting when involved with, fires, spillages, injuries.	**PD**	**ST**
safety requirements when working at height and below ground using relevant equipment .	**PD**	**ST**
the purpose of the work programme and why deadlines should be kept to in relation to progress charts, timetables and estimated times.	**PD**	
the importance of construction site reporting procedures and how changes in circumstances will impact on the works programme timetable.		**ST**
the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they can be implemented.	**PD**	

organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, unit, operative.		**ST**
complex first aid procedures in an emergency.	**PD**	
safety and load bearing rules when constructing bridges to cross gaps of various sizes using existing materials and prefabricated sections.	**PD**	
safety aspects and rules regarding the use of explosive and delivery of basic demolitions.	**PD**	
environmental and health aspects needed for providing water supply to a given location including water storage.	**PD**	

Generic Core Skills	**Assessment Method**	
carry out work to military standards, as laid down by the on-site military design team. All works must be of quality, within budget.		**ST**
interpret information provided in drawings, specifications, schedules, method of statements, risk assessments, Manufacturers' information and industry regulations governing construction.		**ST**
calculate quantity in relation to tools, resources, time, area and wastage associated with the work being undertaken.		**ST**
undertake basic project management process to include the bidding for necessary resources across long logistic chains, whilst avoiding wastage and all to be completed within the required time frame.	**PD**	
undertake site supervision to ensure completion of task in a military (often hostile) environment , maintaining health and safety and a safe working environment.	**PD**	
move, manage and store resources in the workplace in a safe manner.		**ST**

liaise with fellow workers, allied forces and outside agencies to meet local import/legislative requirements required when working in a foreign country.	**PD**	
plan the sequence of work, using appropriate resources, in accordance with organisational procedures to ensure work is completed safely and efficiently.		**ST**
complete relevant documentation necessary to comply with local building regulations.	**PD**	
demonstrate complex First Aid procedures likely to save life in a given situation.	**PD**	
oversee the preparation of resources safely for transport by land, sea or air and safely unload resources with the use of signalling.	**PD**	
undertake core military combat engineering skills including: • develop protective shelters including trench construction being aware of the relevant safety aspects of working below ground. • construct bridges to cross gaps of various sizes using improvised existing materials as well as prefabricated modular bridge components. • use explosives to undertake basic demolitions. • be able to construct a water supply system from a raw source (such as a river) utilising engineering skills to provide water storage and delivery.	**PD**	
use personal protective equipment relevant to the task and the tactical situation.	**PD**	**ST**
communicate effectively to the rest of the team and with management.	**PD**	**ST**
adapt to the environment in which they are working.		**ST**

Bricklayer & Concreter Role Knowledge	Assessment Method	
techniques for setting out and erecting masonry structures in the workplace.		**ST**
techniques for placing and finishing non-specialist concrete in the workplace.		**ST**
characteristics, quality, uses, sustainability, limitations and defects associated with resources in relation to concreting, fabric reinforcing, timber, plywood, proprietary slab edgings, fixings, bricks, blocks, mortars, frames, insulation, damp-proof barriers, lintels, fixings, ties, hand and powered tools and equipment	**PD**	
the correct use of bricklaying and concreting resources and how problems associated with these specific resources are managed and reported.		**ST**
potential hazards associated with bricklaying and concreting resources and methods of work.		**ST**
specific health and safety practices that include any specific procedures, problem solving and the establishment of the authority needed to rectify them covering all aspects of the trade,		**ST**
examples of the above aspects transporting, laying, compacting, curing and protecting concrete with tamped, floated, brushed and towelled finishes, placing fabric reinforcement, concrete mix ratios (volume and gauge boxes), placing concrete into formwork and shuttering, forming slab edging, using hand tools and ancillary equipment and setting out and erecting structures.		**ST**
tools and equipment maintenance when setting out and erecting masonry structures.		**ST**
non-specialist concrete and the ability to describe how to calculate quantity, length, area and wastage.		**ST**
field defence construction and the requirements for reinforcing and strengthening fortifications in a hostile environment.	**PD**	

engineering principles to repair existing masonry structures to render them safe and prevent further collapse.	**PD**	

Bricklayer & Concreter Role Skills	**Assessment Method**	
erect masonry structures in the workplace in brick and block and/or local materials for the cavity wall structures, block work structures, solid wall structures, door and window openings and joint finishes.		**ST**
set out regular shaped structures to given working instructions in brick, block and local materials		**ST**
lay and finish concrete to given working instructions for concrete slabs/bases/foundations (footing, oversites or paths), form slab edging, position reinforcement and form surface finish (tamped, floated, brushed and trowelled).		**ST**
when placing and finishing non-specialist concrete demonstrate measuring, marking out, laying, compacting, finishing, positioning and securing.		**ST**
lay and finish concrete to the given working instructions for concrete slabs/bases (footing, oversites or paths), form slab edging, position reinforcement and form surface finish (tamped, floated, brushed and trowelled)		**ST**
when field defences are required (i.e. trench work and sangers) construct the necessary brickwork to be undertaken to strengthen the structure using brick, block, local materials or concrete.	**PD**	

General Role Behavioural Requirements	**Assessment Method**	
Will be able to demonstrate an alert and tactical awareness prior to, during and after any construction project in a hostile environment and be able to adapt to a changing environment.	**PD**	
Will be able to demonstrate the willingness to take charge of a situation should it be required.	**PD**	

Will be able to demonstrate the initiative to adapt, develop and overcome any situation that may arise during a task whilst maintaining a military approach.	**PD**	
Will be able to demonstrate a responsible attitude towards own and others safety in the workplace.	**PD**	**ST**
Will be able to demonstrate a strong Team spirit and Corps values	**PD**	**ST**

MILITARY ENGINEERING CONSTRUCTION TECHNICIAN BUILDING & STRUCTURAL FINISHER

Key	Assessment Method
PD	Professional Discussion
ST	Skills Test

Generic Core Knowledge	Assessment Method	
the importance of site safety whilst being aware of the role of other site workers and their welfare.	**PD**	**ST**
the principles of waste management, disposal and environmental control in relation to environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations, official guidance and local requirements when working in foreign countries.	**PD**	**ST**
the different techniques and methods used to move, handle and store resources in the workplace and be aware of potential hazards involved with these resources.		**ST**
health and safety requirements for control equipment when undertaking work on site along with accident reporting when involved with, fires, spillages, injuries.	**PD**	**ST**
safety requirements when working at height and below ground using relevant equipment .	**PD**	**ST**
the purpose of the work programme and why deadlines should be kept to in relation to progress charts, timetables and estimated times.	**PD**	
the importance of construction site reporting procedures and how changes in circumstances will impact on the works programme timetable.		**ST**

the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they can be implemented.	**PD**	
organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, unit, operative.		**ST**
complex first aid procedures in an emergency.	**PD**	
safety and load bearing rules when constructing bridges to cross gaps of various sizes using existing materials and prefabricated sections.	**PD**	
safety aspects and rules regarding the use of explosive and delivery of basic demolitions.	**PD**	
environmental and health aspects needed for providing water supply to a given location including water storage.	**PD**	

Generic Core Skills	**Assessment Method**	
carry out work to military standards, as laid down by the on-site military design team. All works must be of quality, within budget.		**ST**
interpret information provided in drawings, specifications, schedules, method of statements, risk assessments, Manufacturers' information and industry regulations governing construction.		**ST**
calculate quantity in relation to tools, resources, time, area and wastage associated with the work being undertaken.		**ST**
undertake basic project management process to include the bidding for necessary resources across long logistic chains, whilst avoiding wastage and all to be completed within the required time frame.	**PD**	
undertake site supervision to ensure completion of task in a military (often hostile) environment , maintaining health and safety and a safe working environment.	**PD**	

move, manage and store resources in the workplace in a safe manner.		**ST**
liaise with fellow workers, allied forces and outside agencies to meet local import/legislative requirements required when working in a foreign country.	**PD**	
plan the sequence of work, using appropriate resources, in accordance with organisational procedures to ensure work is completed safely and efficiently.		**ST**
complete relevant documentation necessary to comply with local building regulations.	**PD**	
demonstrate complex First Aid procedures likely to save life in a given situation.	**PD**	
oversee the preparation of resources safely for transport by land, sea or air and safely unload resources with the use of signalling.	**PD**	
undertake core military combat engineering skills including: • develop protective shelters including trench construction being aware of the relevant safety aspects of working below ground. • construct bridges to cross gaps of various sizes using improvised existing materials as well as prefabricated modular bridge components. • use explosives to undertake basic demolitions. • be able to construct a water supply system from a raw source (such as a river) utilising engineering skills to provide water storage and delivery.	**PD**	
use personal protective equipment relevant to the task and the tactical situation.	**PD**	**ST**
communicate effectively to the rest of the team and with management.	**PD**	**ST**
adapt to the environment in which they are working.		**ST**

Building & Structural Finisher Role Knowledge	Assessment Method	
access/working platforms in the workplace including for use in building maintenance (carpentry), building maintenance (painting & decorating), building maintenance (tiling), building maintenance (plastering), building maintenance (trowel occupations), building maintenance (roofing), building maintenance (glazing).		**ST**
the characteristics, quality, uses, limitations and defects associated with the following resources ladders/crawler boards, stepladders/platform steps, trestles, proprietary staging/podiums, proprietary towers, mobile scaffolding towers, protections equipment and notices, tools and ancillary equipment, water-borne and solvent- borne coatings.	**PD**	
further characteristics, quality, uses, limitations and defects: primers, intermediate coatings (undercoats) and finishes (single pack coatings), single-product systems (e.g. emulsions, varnishes), solvent/thinners, knotting, proprietary sealers, brushes, rollers.	**PD**	
final characteristics, quality, uses, limitations and defects: protective sheeting and masking, cleaning agents, stripping materials and equipment, fillers and bonding agents, primers, surface treatment materials and waterproofing agents, sand, cement, lime and plaster renders, mesh, trims and fixings, wall and floor tiles, grout, adhesives, accessories, hand and/or powered tools and associated equipment.	**PD**	
specific safe working practices and procedures to include: erecting and dismantling access equipment, preparing and painting surfaces, plastering, tiling to all types and angles of walls, glazing windows and/or doors, roofing structures, applying cement and lime renders, using tools and resources,		**ST**
further specific safe working practices and procedures to include: using waterproof membranes, fixing proprietary mesh and trims, applying movement joints, removing existing tiles and preparing background, forming reveals, sills and soffits (door and window openings), forming internal and external angles, fixing channels/form drainage, outlets.		**ST**
the requirements for completing and maintaining records of actions taken to be included as part of the site hand over procedures.		**ST**

the requirements for maintaining tools and equipment used when erecting and dismantling access/working platforms, applying paint systems using rollers and associated tools and equipment, preparing background surfaces for plastering, panelling or painting/decorating tiling wall and floor surfaces, glazing windows and doors and roofing structures.		**ST**
health and safety requirements for structures built for temporary occupation in a military environment.		**ST**

Building & Structural Finisher Role Skills	**Assessment Method**	
demonstrate skills when erecting, moving, positioning, dismantle and store access/working platforms in the workplace for building maintenance (carpentry), building maintenance (painting & decorating), building maintenance (tiling), building maintenance (plastering),		**ST**
further skills to demonstrate: building maintenance (trowel occupations) in a safe and efficient manner using ladders/crawler boards, stepladders/platform steps, proprietary towers, trestle platforms, mobile scaffold towers, proprietary staging/podiums.		**ST**
demonstrate work skills when mixing, pouring, diluting, loading, laying-on, laying-off, cutting and applying paint systems by brush and/or roller.		**ST**
apply water-borne and/or solvent-borne coatings to internal and/or external surfaces for industrial and/or non-industrial situations, to given working instructions, for linear/trim/narrow runs and broad areas by brush and/or roller.		**ST**
safely store the materials, tools and equipment used when applying paint systems by brush and/or roller and when preparing background surfaces for plastering, tiling, panelling or painting/decorating and when tiling wall and floor surfaces.		**ST**
prepare background surfaces for plastering, tiling, panelling or painting and decorating in the workplace.		**ST**
demonstrate measuring, marking out, washing, stripping/scraping, abrading/keying, hacking, cutting out, removing, mixing, filling, levelling/flattening, brushing down, priming when preparing background surfaces for plastering, tiling, panelling or painting/decorating.		**ST**
prepare new or existing background surfaces for plastering and/or tiling and/or panelling and/or painting/decorating to		**ST**

given working instructions for previously plastered, tiled, panelled or painted/decorated surfaces, brick, block, concrete, render or plaster, manufactured board, wood, metal.		
Fix tiles to vertical, horizontal and inclined surfaces to given working instructions on wall and floor surfaces, reveals, sills and soffits (door and/or windows), floor drainage and outlets, fixture of appropriate accessories.		**ST**

General Role Behavioural Requirements	**Assessment Method**	
Will be able to demonstrate an alert and tactical awareness prior to, during and after any construction project in a hostile environment and be able to adapt to a changing environment.	**PD**	
Will be able to demonstrate the willingness to take charge of a situation should it be required.	**PD**	
Will be able to demonstrate the initiative to adapt, develop and overcome any situation that may arise during a task whilst maintaining a military approach.	**PD**	
Will be able to demonstrate a responsible attitude towards own and others safety in the workplace.	**PD**	**ST**
Will be able to demonstrate a strong Team spirit and Corps values	**PD**	**ST**