SPECIALIST APPRENTICESHIP PROGRAMME

INSITU TREATMENT OF TIMBER AND DAMP ABOVE GROUND IN BUILDINGS

Property Care Association

Specialist Apprenticeship Programme

In situ treatment of Timber and Damp above ground in buildings
(Building Preservation)

Section 1.0 – Introduction:

The in situ treatment of timber and damp above ground in buildings is a specialised activity within the construction industry carried out by specialist contractors such as those who are members of the Property Care Association (PCA), formerly the British Wood Preserving and Damp-proofing Association (BWPDA). The PCA's roots go back to June 1930 when the British Wood Preserving Association was first incorporated.

To carry out their work PCA specialist contractors utilise the latest materials, products and techniques, many of which were developed by PCA manufacturing members. A PCA specialist contractor's work will vary from an in situ spray treatment of timber to major structural repairs and rising damp treatment projects.

There is a history of new entrants to the sector being trained on an ad hoc basis by individual employers providing 'on the job' training interspersed with some supplier product training. The PCA Specialist Apprenticeship Programme has been designed to provide a formal, structured programme of training covering every aspect of in situ treatment of timber and damp above ground in buildings over a two-year period resulting in the achievement of an N/SVQ level 2 in *Insulation and Building Treatments (Wood Preserving and Damp-proofing).* The PCA apprenticeship will ensure that an apprentice is able to understand the hazards and safe working practices within the building preservation industry and, on completion of the training, operate to industry standards of competence.

The apprenticeship is delivered in modules based on the N/SVQ structure for in *Insulation and Building Treatments (Wood Preserving and Damp-proofing)* with a mix of formal instruction off-site and supervised on the job training. The off-site training sessions are provided by PCA in partnership with a number of chosen training providers at locations around the UK. They are not continuous but spread out over the two-year programme in order to allow the apprentice to gain experience on site and reach a level of competency in one module before progressing onto the next.

The on-site training is carried out during normal working hours under the supervision of a designated Training Supervisor identified by the employer. The apprentice will also receive a number of visits from an approved N/SVQ assessor during the two years to assess his progress in terms of the N/SVQ.

All treatment procedures covered in the PCA Specialist Apprenticeship Programme are in accordance with the latest editions of the PCA Codes of Practice, relevant British Standards, Building Research Establishment (BRE) Digests and Health and Safety Executive (HSE) requirements

Due to the nature of the work it is considered that the preferred minimum age for suitable entrants will be 18 years of age upwards thus there is thought to be no requirement for 'Key Skills' inclusion.

Section 2.0 - Aims & Objectives:

This training scheme is for new entrants into the Building Preservation Industry. It is the intention of the training scheme to develop each individual to a competency level acceptable to the sector. The Apprenticeship is designed to be delivered in a modularised manner by a mix of formal instruction “off-the-job” training, followed by supervised “on-the-job” training at employer level with a final end assessment.

It can take account of any distant learning processes involving workbooks as well as e-learning methodology, along with the flexibility of day or part day release, evening classes, or a permutation of several of these.

This ‘on the job’ supervision will be conducted by a training supervisor and there will be a candidate record book or a form of recording agreed with the sector, to evidence training received in Safety, Knowledge & Understanding, and Practical competences.

The learner will gain further experience through “off-the-job” training sessions in every aspect of the industry, but the scheme provides flexibility through the “on-the-job” training elements to suit the employer’s core business requirements whilst delivering the N/SVQ Level 2 within an 18-month learning period.

The course contents are designed to ensure that the learner is able to understand the hazards & the safe working practices within this specialised industry and, upon completion of training, the learner will be able to operate any necessary equipment safely and carry out the required work tasks to industry standards of competence.

The course days may not be consecutive, which will allow for a variety of site situations where the use of different types of remedial treatment works can be completed over different days on different sites.

Section 3.0 - Course set up:

Ratio of Trainer to Learners:

- Practical elements – 1: 4 (workshop)
- Practical elements - 1: 2 (on site)
- Classroom elements – 1: 12

Each learner will have to demonstrate competence of each module via assessment and professional discussion; logging results in workbooks or other industry approved portfolio formats.

Tutor Profile:

The role of the tutor is crucial to the success of the apprenticeship and as such approval from PCA will be required prior to delivery.

A tutor must have:

- A minimum of five years proven history spent working within the timber and damp treatment industry or able to provide evidence of recognised up skilling (e.g. Train the Trainer).

- Proven competence in the design and delivery of training courses in construction topics and good presentational skills.

Assessor Profile:

- An approved VQ Assessor with proven expertise within the timber and damp treatment industry.

Training Supervisor:

To mentor the apprentice and supervise their on-site training and assessment for the N/SVQ, it is necessary for the employer to nominate an individual within the company to act as Training Supervisor. The Training Supervisor will have a minimum of 5 years sector experience, ideally hold VQ Level 2 in *Insulation and Building Treatments (Wood Preserving and Damp-proofing)* and hold the relevant CSCS card.

Most formal instruction within the modules will be followed by non-consecutive days of supervised on-site training and module assessments conducted by the Training Supervisor. The training provider will ensure that suitable instruction and advice is made available to the Training Supervisor to ensure quality and consistency throughout the scheme.

The Training Supervisor will support the apprentice in collating, recording and signing off evidence of the apprentice's training in their Training Logbook as follows:

- Read the contents of the Training Logbook and understand what the apprentice has to achieve for each unit.

- Agree with the apprentice and the employer which jobs will provide the best opportunities for the apprentice to obtain the necessary evidence.
- Observe how the apprentice carries out particular activities and check the finished work against requirements.
- Record each observed activity with the date and initial the column.
- Sign off the activities observed.
- Discuss observations with the apprentice and give guidance, where necessary, on any improvements that can be made.
- Discuss the apprentice's progress when requested with visiting assessor(s) etc.

Section 4.0 – Assessment:

Assessment will occur at a number of points during the course of the PCA Specialist Apprenticeship Programme.

The apprentice will be required to complete a Knowledge Check at the end of each off-site training session to demonstrate that they have understood the training undertaken. This will generally constitute a basic multiple-choice Question and Answer (Q&A) assessment.

There will also be a minimum of four N/SVQ assessment points during the two years. There may be a requirement for additional N/SVQ assessment visits for a number of reasons (e.g. illness or remedial training). These assessment points are designed to assess the learners understanding of training previously undertaken as part of the programme and enable monitoring of the apprentice's progress.

	Month	**Point during Programme**
1.	6 - 7	Completion of module 18
2.	11 - 12	Completion of module 19
3.	14 - 15	Completion of module 22
4.	20 - 24	Final sign off

The Assessor will co-ordinate and undertake the above assessment visits on site. All visits will assess whether the training has been effective and is being practised safely and correctly. Training Logbooks will be checked and feedback provided to the apprentice and the Training Supervisor as appropriate.

Please note that visit 3 will include a check of the N/SVQ requirements and the drawing up of an action plan for the completion of the apprentice's individual N/SVQ Portfolio.

It is intended that these assessment points will be supported and underpinned by regular contact with both the Assessor and a representative from the PCA to monitor the apprentice's progress.

Section 5.0 - Collecting evidence

Learners are required to build a portfolio of evidence of work that they have completed, or assessments that they have undertaken, which together will provide sufficient evidence to prove their competence.

The portfolio should include:

- Records of work tasks that the learner has completed relevant to the VQ requirements – plans, work records, testimonials, photographs and practical tests.

- Records of knowledge assessments and tests.

Sources of evidence:

Evidence which contributes to proof of competence may come from a number of sources including:

- Observations of the learner's practical performance by the training supervisor in the workplace, or at an assessment centre which could include work procedures and sequences, in addition to the completed job.

- Oral or written questioning - records of oral or written questions as well as assignments that the learner has undertaken on their own.

- Certificated previous achievement – where a learner has previous certificated achievement in competences that are appropriate towards the N/SVQ 2. They may be put forward for accreditation against the requirements and taken into account provided that:

  - The assessor is satisfied about the authenticity of the evidence and the conditions under which it was collected.

  - The assessor is satisfied that the competences covered by the evidence are current, and that the learner is still capable of the performances covered by the evidence.

Provision and Conduct of Assessments:

Assessments will be conducted in accordance with the Awarding Organisations provisions of the National Vocational Qualification (N/SVQ) structure, the main requirements of which are:

- Assessments are subject to internal verification and a Quality Adviser Service in line with QCA N/SVQ Code of Practice 2006 paragraphs 48 – 56 and ENTO V1.

- The dates and times of practical assessments are as agreed between the assessor, learner and employer.

Section 6.0 - Training Modules Summary

The training modules in this scheme have been developed to introduce the learner to the occupational competencies required for the various materials, equipment and processes used within the industry.

The modules focus on the practical skills and underpinning knowledge that will enhance the awareness of safety, security and approved procedures for carrying out in-situ timber treatment and associated repairs, rising and penetrating damp treatment works.

Training Modules Summary

Module	Subject	Off-site instruction	On-site training and assessment	Month
M1	Apprentice Scheme Registration and N/SVQ induction	1 day	-	1st week
M2	Introduction to Building Preservation	½ day	-	1st week
M3	Health & Safety	2 days	-	1st week
M4	Manual Handling	½ day	-	1st week
M5	Asbestos Awareness	½ day	-	1st week
M6	First Aid	1 day	-	1st week
M7	Documentation and Information	½ day	-	1
M8	Building Construction, Terminology and Types	1 day	5 days	1 - 2
M9	Treatment Application Plant and Equipment	1 day	2 days	1 - 2
M10	Small Tools	1 day	2 days	1 - 2
M11	Wood Boring Insects	1 day	-	3
M12	The Control of Wood Boring Insects			
M13	Wood Rotting Fungi and its Control			
M14	Preparation for the application of a Timber Treatment Product and Masonry Biocide	½ day	5 days	3
M15	Exposure of a Dry Rot Outbreak	1 day	10 days	4 - 5
M16	The Application of a Timber Treatment Product to insitu Timbers in a Building	1 day	20 days	4 - 5
M17	The application of a Masonry Biocide	½ day	5 days	4 – 5

M18	Preparation for and the application of Paste and Gel type Timber Treatment Products.	½ day	5 days	4 - 5
M19	Building Repairs	5 days	60 days	6 - 16
M20	Rising Damp and its Control	1 day	30 days	16 - 20
M21	The internal fixing of cavity drainage membrane above external ground level as a dry lining system	1 day	20 days	20 - 22
M22	Exterior wall surface preparation and the application of a Surface Water Repellent	½ day	5 days	20 - 22
M23	Assessment and Final Sign Off	-	-	20 - 24
	TOTAL DAYS	**21**	**169**	

Section 7 - Level 2 N/SVQ Diploma in Insulation and Building Treatments (Wood Preserving and Damp-proofing)

PCA Specialist Apprenticeship Programme – In situ treatment of Timber and Damp above ground in buildings - Pathway 1:

Credit value (Pathway 1): 57

Minimum credit to be achieved at, or above, the level of the qualification: 57

This structure has been recommended by employers and stakeholders from the above occupational area for organisations to form the basis of academic capability and competence outcomes. Qualifications with a competence outcome at the above level must have units derived from the following National Occupational Standards (NOS) and consist of the mandatory groups as stated for the individual option route.

CITB unit reference – Unit Title – Credits per Unit – Applicable N/SVQ level

Mandatory units for all pathways – (credit value 10)			
Unit ref	**Title**	**Credits**	**N/SVQ Level**
QCF641	Conform to general workplace health, safety and welfare	2	1
QCF642	Conform to productive work practices in the workplace	3	2
QCF643	Moving, handling and storing resources in the workplace	5	2
Wood Preserving and Damp-proofing Option Route (Total 6 NOS)			
QCF444	Preparing Structures for treatment in the workplace	13	2
QCF445	Applying preservation treatment in the workplace	16	2
QCF446	Reinstating the structure after treatment in the workplace	18	2

Cross Reference to N/SVQ – Pathway 1

Module No.	Module Title	Mandatory Units - all pathways			Mandatory Units for pathway 1		
		QCF641	QCF642	QCF643	QCF444	QCF445	QCF446
M1	Apprentice Scheme Registration and N/SVQ induction	✓	✓	✓	✓	✓	✓
M2	Introduction to Building Preservation	✓	✓	✓	✓	✓	✓
M3	Health & Safety	✓	✓	✓	✓	✓	✓
M4	Manual Handling	✓		✓	✓		✓
M5	Asbestos Awareness	✓					
M6	First Aid for Appointed Persons	✓					
M7	Documentation and Information	✓		✓			
M8	Building Construction and Terminology				✓		✓
M9	Treatment Application Plant and Equipment				✓	✓	
M10	Small Tools	✓					
M11	Wood Boring Insects				✓		
M12	The Control of Wood Boring Insects				✓	✓	
M13	Wood Rotting Fungi and its Control				✓	✓	

M14	Preparation for the application of a Timber Treatment Product and Masonry Biocide		✓		✓	✓	✓
M15	Exposure of a Dry Rot Outbreak				✓		
M16	The Application of a Timber Treatment Product to Insitu Timbers in a Building				✓	✓	
M17	The application of a Masonry Biocide		✓		✓	✓	
M18	Preparation for and the application of Paste and Gel type Timber Treatment Products		✓		✓	✓	
M19	Building Repairs		✓				✓
M20	Rising Damp and its Control		✓		✓	✓	✓
M21	The internal fixing of cavity drainage membrane above external ground level as a dry lining system	✓	✓		✓		
M21	Exterior wall surface preparation and the application of a Surface Water Repellent		✓		✓	✓	
M22	Assessment and Final Sign Off	✓	✓	✓	✓	✓	✓

PCA Specialist Apprenticeship Programme

In situ treatment of timber and damp above ground in buildings

Section 8.0 Training Modules

M1 - Module 1.0 – Apprenticeship Scheme Registration & N/SVQ Induction

This module outlines the overall PCA Specialist Apprenticeship Programme and informs the learners of what is to be expected in their learning journey to qualification.

Ref	Practical	Knowledge
M1.01	**Housekeeping.** • Inform learners of the housekeeping information / requirements. • Issue any agenda, timetables, site maps as applicable / required.	**Learners to be made aware of:** • Agenda or running order. • Fire/emergency exit and assembly points. • Fire drill/alarm if expected. • Predicted breaks and timing. • Toilet locations. • Areas out of bounds/restricted access. • Location of any Practical training areas.
M1.02	**Literacy and numeracy** • Assess the literacy and numeracy skills of the apprentice to determine whether additional support will be required in this regard.	**Learners to be made aware of:** • Requirement to understand written work instructions • Need to calculate material quantities and assess dimensions • Need to interpret drawings/ sketch plans and extract information
M1.03	**VQ Registration.** • Issue forms for completion by Learners.	**Learners to be made aware of:** • The apprenticeship programme and how it works

	• Offer support to completion.	• What registration to Qualifications means to them. • What qualification it applies too. • The assessment process.
M1.04	**Learner Training Logs, Workbooks, Portfolio Building & Assessment.** • Issue to the apprentice the required documentation including the Training Logbook, Workbooks and N/SVQ Portfolio etc.	**Learners to be made aware of:** • The N/SVQ process and the importance of collating relevant evidence • The roles and responsibilities of the key parties involved in the programme including the N/SVQ • The purpose of the logs / workbooks. • How to complete them. • How to build a portfolio. • Suitable content for evidence.
M1.05	**Introduction to CSCS** • Explain the whole arrangements for CSCS cards and the reasoning behind them. • The purpose of the touch screen test. • The apprentice will be registered for an N/SVQ level 2 in *Insulation and Building Treatments (Construction)* and an application submitted for a red CSCS Trainee card. In order to apply for the CSCS card, the apprentice will need to pass the touch-screen CSCS Health & Safety Test (operative). It is recommended that the apprentice reads the current edition of the CSCS Health & Safety Test Questions booklet and/or uses the CD Rom which is available for practice. **Preparing for the CSCS Health & Safety Test is the responsibility of the apprentice and his employer**.	**Learners to be made aware of:** • The reasons for skill cards. • What CSCS is, and stands for. • How they are obtained. • When to apply. • Health & Safety touch screen test *(if not previously taken)*

M2 - Module 2.0 – Introduction to Building Preservation		
This module provides an explanation to the apprentice of Building Preservation outlining its importance and relevance. This Apprenticeship module will provide a general overview of the Building Preservation Industry and when it is required.		
Ref	**Practical**	**Knowledge**
M2.01	**Building preservation technician's job.** • The duty a Building Preservation Technician is expected to perform is to be outlined their relevance and significance.	**Learners to be made aware of:** • Their role as the company's ambassador on site • The need to be observant about all matters that may impact upon their work • Their Health and Safety responsibilities
M2.02	**Different routes available within a specialist trade.** • Carpenter • Joiner • Plasterer • Plumber • Bricklayer	**Learners to be made aware of:** • The type of work undertaken by a carpenter • The type of work undertaken by a joiner • The type of work undertaken by a plasterer • The type of work undertaken by a plumber
M2.03	**When Building Preservation is required.** • Building renovation and development. • The significance of unwanted moisture in a building. • Lending institution's requirements. • Local Authorities, Housing associations and Landlords. • Householders.	**Learners to be made aware of:** • How building preservation work may be required during building renovation and development. • The problems and situations caused by unwanted moisture in a building. • Stipulations and requirements imposed by lending institutions on their clients. • The responsibilities of Local Authorities, Housing associations and landlords to their tenants.

M2.04	**Surveys and inspections**
	
	• Accompany a CSRT qualified surveyor with a minimum of five years' experience conducting damp/rising damp surveys/inspections for a minimum of 2 days.
	  ▪ Identify potential problem areas and situations.
	  ▪ Identify 'tell-tale' signs of timber and damp problems.
	  ▪ How to use a torch and mirror when conducting inspections.
	  ▪ How to use a hand held moisture meter and interpret results.
	  ▪ How to 'follow the trail' when conducting inspections.
	
	• Be made aware of the report preparation process.
		Learners to be made aware of:
		
		• Good practice and procedures to follow when conducting a survey/inspection including:
		
		• The limitations of a hand held moisture meter.
		
		• The importance of the survey report and its content.

M3 - Module 3.0 – Health & Safety		
The following Health & Safety matters will be discussed with the candidate and where required a competent Health & Safety Instructor will deliver training to ensure that the candidate has been fully trained and is updated with current legislations.		
Ref	**Knowledge**	
M3.01	**Legislation**	**Understand the need and reasons for legislation to safeguard both Employers as well as Employees:** • Health and Safety at Work Act • Understand Employer and Employee responsibility
M3.02	**Health & Safety responsibilities**	**Develop an understanding of Health & Safety with particular reference to the following areas:** • Protection of the Public. • Risk Assessment & Communication. • Role of Health & Safety Executive (HSE). • Contractors and the self-employed. • Vital co-operation duties between contractors and duty holders. • Co-operation duties for workers, managers and supervisors.

M3.03	**Accidents in the Work Place**	**Understand how accident reporting enables a reduction in repeat incidents and prevention of future accidents. With reference also to the following:** • Reporting Accidents. • Accident Prevention. • Near misses. • Working Procedures & Safety Rules. • First Aid & Welfare Arrangements.
M3.04	**General Hazards on Site**	**Develop an understanding of how to identify hazards on site and control measures which need to be implemented to prevent and reduce the risk of the hazard with particular reference to:** • Knowing your Signs. • Electricity & Portable Tools. • Pedestrian & Vehicle Segregation. • Loading and Unloading. • The product label • Control of Substances Hazardous to Health. (COSHH) • Overhead and under floor dangers.
M3.05	**Working at Heights**	**Develop an understanding of the Risk of Working at height and be able to identify the control measures to eliminate risk and manage the controls with particular attention to:** • Falls from Heights. • Typical Risk Control Measures. • Scaffold & Towers. • PASMA Certification • Ladders & Trestles.(short duration) • Leading Edges & Openings. • Roof Works. • Fall Arrest Systems.

		• Protection of others.
M3.06	**Fire Prevention**	**Understand the principle of the Fire Risk and control measures that should be used to prevent Fire on Construction sites with reference to:** • The Fire Plan. • Dealing with Fires. • Evacuating your Workplace in an Emergency. • The 3 Things Needed to Start a Fire. • Fire Fighting Equipment. • When not to tackle a Fire.
M3.07	**Working in Confined Spaces**	**Understand the risks associated with working in a confined space and the measures that should be in place before doing so:** • Assessment of the task • Assessment of the working environment • Can the task be performed another way • Assessment of the working materials and tools • The suitability of those carrying out the task • Arrangements for emergency rescue • Capabilities of rescuers

M3.08	**Personal Protective Equipment (PPE)**	**Understand why we use PPE and Develop practical understanding of how PPE can reduce the risk of injury when used correctly with particular reference to the following:** • Why we use it? • Who provides PPE? • Routine inspection of equipment. • Your responsibilities. • PPE Selection. • RPE Face Fit Test • Correct use and storage of PPE. • Safe Disposal of Contaminated PPE

M4 - Module 4.0 – Manual Handling - Off-Site Instruction		
This module is designed to provide the apprentice with knowledge of the risks associated with moving and handling objects. It will teach approved lifting and carrying techniques before the apprentice commences work on site under the PCA Specialist Apprenticeship Programme in order to reduce the risk of accidents and injuries. A specialist trainer will carry out the Manual Handling training in line with current legislation and industry approved methods and procedures. The apprentice will be issued with a certificate of attendance on successful completion of this module.		
Ref	**Knowledge**	
M4.01	**Manual Handling and the law**	• Management of Health and Safety Regulations 1999 • Manual Handling Operations Regulations 1992
M4.02	**Manual Handling hazard identification and assessment**	• Avoid hazardous manual handling operations so far as reasonably practicable. • Assess any hazardous manual handling operations that cannot be avoided. • Reduce the risk of injury so far as reasonably practicable
M4.03	**Manual Handling and the human body** **Use good lifting technique in line with the guidance.**	• Mechanics of body movement. • Group lifting. • Analysis of movement: The fundamental lifting, pushing and pulling, turning and carrying techniques

M5 - Module 5.0 – Asbestos Awareness - Off-Site Instruction		
A specialist trainer will carry out the training in line with current legislation and requirements approved by UKATA, IATP or equivalent. The apprentice will learn about the hazards posed by asbestos. This half-day module will make the apprentice aware of the health and safety aspects of asbestos and instil the ability to recognise Asbestos Containing Materials that may be encountered during the course of their work. It will provide information needed to avoid work that may disturb asbestos during any normal work activity which could disturb the fabric of a building, or other item which might contain asbestos. It will not equip the apprentice to carry out work with asbestos-containing materials. The apprentice will be issued with a certificate of attendance on successful completion of this module.		
Ref	**Knowledge**	
M5.01	**Asbestos and the law**	• The Control of Asbestos Regulations 2012.
M5.02	**Asbestos and the working environment**	• Properties of asbestos and its effects on health, including the increased risk of developing lung cancer for asbestos workers who smoke. • The types, uses and likely occurrence of asbestos and asbestos materials in buildings and plant. • General procedures to deal with an emergency, e.g. an uncontrolled release of asbestos dust into the workplace • How to avoid the risk of exposure to asbestos

M6 - Module 6.0 – Emergency First Aid at Work		
One day Emergency First Aid at work training is carried out to nationally recognised standards and recommended by the Health and Safety Executive. The apprentice will receive basic first-aid training so they have the knowledge and necessary skills to deal with some accidents or injuries they may come across on site. The apprentice will be issued with a certificate of attendance on successful completion of this module.		
Ref	**Knowledge**	
M6.01	**First Aid and the law.**	• The Health and Safety (First Aid) Regulations 1981.
M6.02	**First Aid and the working environment.**	• Managing an incident • Priorities of First Aid • Resuscitation • Blood loss • Treatment of unconscious casualty • Treatment of shock • Treatment of heart attack • General discussion on common workplace injuries.

M7 - Module 7.0 – Documentation and Information		
This module covers the simple documentation and information which is relevant to the apprentice working on a site. The module is for the learner to understand the minimum requirements when dealing with resources on a site.		
Ref	**Practical**	**Knowledge**
M7.01	**Documents & Drawings** **Understand the Documents that are issued to enable the works to be carried out effectively and safely:** • Check site address and access arrangements.	**Learners should:** • Have a good general knowledge of the geographical area in which work is normally conducted. Be aware of what constitutes lawful and unlawful entry into a property.
	• Review the specification of Work. Understand the type and extent of work to be undertaken. Be comfortable with what you are required to undertake.	• Be familiar with the type of work in the work specification and have the ability to execute it correctly and safely.
	• Review specification and as necessary obtain all necessary equipment needed for the safe completion of the work to your company's requirements.	• Know where to obtain all regularly used equipment and the order procedures necessary to procure such.
	• Check Job Lists – Cutting lists, stock withdrawal, plant required, materials required.	• Know how to check Job Lists, specific requirements, where and how to obtain stock plant and materials.

	• Read the COSHH assessment applicable to the work to be undertaken/materials to be used and act accordingly. Check the correct and appropriate PPE is readily available prior to attending site.	• Be familiar with COSHH assessments and their purpose. Be familiar with PPE required for the materials or circumstances you might be exposed to.
	• Read the Material Safety Data Sheets applicable to materials you will be using and be aware of their importance in the event of an accident.	• Be familiar with Material Safety Data Sheets, their content and when and by whom they may be required. Know where they are stored whilst working on site
	• Read and as necessary act upon the Risk Assessment applicable to the task or tasks to be undertaken. Conduct and record a risk assessment for a task.	• Understand the purpose of a Risk Assessment, what its relevance is to you and others who may be exposed to your work activities.
	• Read the Method Statement(s) (Safe system of work) applicable to the work to be undertaken.	• Understand the Method Statement and why you must follow work sequence set out in the statement.
	• Review any drawings/sketch plans and understand the relevant information it contains. Seek clarification as necessary.	• Be aware of the type of information a drawing/sketch plan should contain in respect of the type of work you are required to undertake. Know whom to contact in the event of a query and the information that will be required.
	• Review work schedule/time allowance. Assess the job to be undertaken in relation to the work Schedule/time allowed and plan work accordingly.	• Monitor work progress on site against the agreed programme to ensure compliance. Know when and whom to notify in the event of a variation.

	• Make provision for any material delivery schedules to site. Collect and store materials and retain all site delivery notes.	• Be aware of materials that will be delivered to site, how and when they will be delivered and make provision for safe storage on site. Collect a delivery note.
	• Correctly complete all required forms, documents and records necessary upon completion of a job.	Know how to correctly complete the forms, documents and records that are required to at the conclusion of a job as stipulated by your employer or other authorities.
M7.02	**Site Compliance** • Be conversant and comply with all site requirements as instructed by your employer and the site where work will be undertaken. • Comply with Site Safety Induction requirements.	**Learners should:** • Understand how co-operation on site can improve the Health and Safety culture resulting in improved working conditions for all. • Ensure you take responsibility and care of yourself, your colleagues and other persons on site. • Comply and conform to instructions. • Communicate with others and report any failures or issues. • Not handle or interfere with any plant or equipment on site other than that for which you have been appropriately trained and have the authority to do so. • Be confident that you are trained appropriately to complete the task you are set. • Ensure that any plant and equipment used is maintained correctly.

M7.03	**Site Delivery, Off Load and Storage** • Make preparation as necessary ready to receive a delivery. • Check off a delivered load against the delivery note. Report any discrepancy. • Off load material in accordance with safe Manual Handling requirements.	**Learners should:** • Understand the need to check and safely off load materials and to store them in a safe accessible place. • Check delivery schedule/material lists to ensure correct components/materials are present. • Identify any specific loading & unloading instructions that need to be followed. • Understand the importance of planning storage of materials correctly for best use after off-loading. • Be aware of the Manual handling regulations.

M8 - Module 8.0 - Building Construction and Terminology		
This module will inform an apprentice about different methods and materials used for construction. They will learn about different methods of construction, the function and performance of building components and terminology used to describe them. The importance of understanding building construction in respect of in-situ timber and damp treatment will be emphasised. Following the completion of this module the apprentice should be able to demonstrate a good general understanding of building construction.		
Ref	**Practical**	**Knowledge**
M8.01	**Roof structure:** Be familiar with the construction of a timber flat roof.	**Learners to be made aware of:** • Timber flat roof construction ▪ Firring pieces ▪ The roof deck ▪ Thermal insulation – Warm roof – Cold roof ▪ Load bearing or primary structure ▪ Fixing of joists to the external wall ▪ Waterproof coverings ▪ Solar protection
M8.02	**Roof structure:** Be familiar with and identify the varied construction of pitched roofs. • Double-Pitch (Couple roof) • Closed couple roof • Collar roof • Support for ceiling joists • Parapet walls • Eaves • Purlin roof • Roof valleys • Trusses • Gable and Hipped roofs • Single and double Mansard roofs • Double lean-to/butterfly roofs • Rain water disposal	**Learners to be made aware of:** • **Timber pitch roof construction** ▪ Pitched roof construction. ▪ The components of a couple roof. ▪ The components of a closed couple roof and their function. ▪ The components of a collar roof and their function. ▪ The provision of a hanger in tension. and a binder to support ceiling joists. ▪ Parapet walls, eves detail requirements and drainage using a zinc or lead lined gutter. ▪ Overhanging eaves, fascias and soffits. ▪ The components and construction of a purlin roof. ▪ The components and construction of roof valleys.

		▪ The function of a roof truss and roof construction where trusses are likely to be present. ▪ The difference between gable and hipped roofs. ▪ The difference between single and double Mansard roofs. ▪ The construction of Double lean-to/butterfly roofs. ▪ Performance requirement of gutters and rain water down pipes. ▪ The need for and provision of ventilation in a roof space. ▪ The prevention of fire spread in a roof space.
M8.03	**Roof coverings:** Be familiar with different types of pitched roof covering and construction detail requirements.	**Learners to be made aware of:** • Pitched roof coverings ▪ Natural slate ▪ Stone slates (slabs) ▪ Plain tiles ▪ Pantiles ▪ Roman tiles ▪ Interlocking tiles ▪ Synthetic slate ▪ Fascia board and soffit details ▪ The need for and provision of ventilation in a roof space ▪ Roofing felt and battens ▪ Lead flashings and soakers ▪ Mortar flashings ▪ Valleys ▪ Chimney flashings, front apron and back gutter ▪ Penetrating vent pipes ▪ The prevention of fire spread in a roof space

M8.04	**Foundations:** Be familiar with general factors that affect the choice of foundation such as building load, soil types, soils under load.	**Learners to be made aware of:** • Foundation types: ▪ Strip foundation ▪ Pile foundation ▪ Raft foundation • Other considerations including the water table, special problems of clay soils and ground water and frost heave.
M8.05	**External load bearing walls:** The external wall of a building has two basic functions; ▪ To support the loads of suspended floors and the roof ▪ Environmental protection To satisfactorily fulfil these functions there are a number of requirements for an external load bearing wall. These are: ▪ Strength and stability ▪ Weather protection ▪ Thermal insulation ▪ Fire protection ▪ Durability	**Learners to be made aware of:** • External load bearing wall construction ▪ Different types of bricks – common, facing and engineering bricks. When and where they are used. ▪ Concrete bricks. ▪ Blockwork – dense and lightweight ▪ The composition of mortar and its function. ▪ Jointing and pointing. ▪ Laying of bricks, different bricks bonds. ▪ Openings in solid brick walls and the support required at the top or head of an opening. ▪ Early damp proof courses – different types. ▪ Cavity wall construction. ▪ Timber frame construction. ▪ The construction of stonework walls. ▪ Brick and flint walls. ▪ Party walls. ▪ Parapet Walls. ▪ Rain penetration.
M8.06	**Upper timber floor construction:** The function of an upper timber floor is to support the loads imposed upon it by contents, furniture and people. To fulfil this function in a safe and satisfactory manner there are a number of technical requirements:	**Learners to know:** • The meaning of the term ‘span’ in relation to floor joists. • The relationship between joist dimension, centres and span.

	• The floor must be structurally stable and must not suffer excess deflection when a load is imposed upon it. • The floor should provide restraint of the external walls. • The floor should provide suitable fire protection to delay the spread of fire. The level of protection will depend upon the number of storeys and the nature of the building *i.e*. flats or houses. • The upper floor, particularly if part of a block of flats, should provide good sound insulation.	• Be aware of Span Tables and Strength Grading of joists as produced by the Timber Research and Development Association (TRADA) • Square edge and tongued-and-grooved floor boards. • In respect of fire place, stair well and bay windows – what are: ▪ Trimmed joists ▪ Trimmer joists ▪ Trimming joists ▪ The performance requirements of each of the above • Different types of strutting used in a floor. • Folding wedges in relation to strutting and their function. • Different methods of securing joists to the external wall. The importance of wall restraint. • Support of floor from internal load bearing walls. • Different ceiling finishes including lath and plaster. • Fire protection and how it is achieved. • Methods of achieving sound insulation.
M8.07	**Ground floor suspended timber floor construction:** The function of a ground floor is to provide a level, smooth and dry surface that will safely support the loads imposed upon it by contents, furniture and people. To successfully achieve this it must have:	**Learners to know:** • The meaning of the term ‘span’ in relation to floor joists. • The relationship between joist dimension, centres and span. • Be aware of Span Tables and Strength

	• Strength and stability • Resistance to damp penetration • Thermal insulation • Durability Good design and construction should ensure that the floor can satisfactorily fulfil its function throughout the proposed life of the building.	Grading of joists as produced by the Timber Research and Development Association (TRADA) • Square edge and tongued-and-grooved floor boards. • Sleeper walls and other means of intermediate support. • Ventilation requirements for sleeper walls and sub-floor partition walls (honeycombed walls). • The provision of adequate sub-floor ventilation by correctly positioned and spaced efficient air vents in external walls. • The potential consequences of inadequate sub-floor ventilation. • The importance of isolating timber from a potential damp source.
M8.08	**Ground floor solid floors:** Solid floors at ground floor level may be present as part of the original structure or it may be necessary to replace a suspended timber floor with a new solid floor. • Pre-existing solid floors are usually constructed of hardcore, concrete and screed. Prior to 1965 the incorporation of a damp proof membrane was not a requirement thus a variety of surface damp 'protection' methods were employed. • A new solid floor may be required in place of an existing decayed timber floor. A new solid floor will incorporate hardcore, concrete slab, damp proof membrane, insulation and screed.	**Learners need to know:** • Types of surface damp protection employed on older solid floors. • What happens if no damp precautions are present in or on the solid floor. • What might happen to solid walls abutting a solid floor with no damp precautions. • The construction procedure and the function of the component parts of a new solid floor. • The importance of a damp proof membrane, what is suitable for use as a membrane and its correct installation. • How to make provision for adjacent sub-floor ventilation through/beneath a new solid floor

M8.09	**Partitions:** Partitions can be internal load bearing and non-load bearing walls. • The primary function of a non-load bearing wall is to divide space. Such walls may be built of a variety of materials such as brick, block, timber and plasterboard. • Load bearing partitions have the additional function of supporting upper floors and in some cases part of the roof. Such walls may be built of bricks, blocks and timber.	**Learners to know:** • The construction of a timber stud partition wall. • What is: ▪ A timber stud ▪ A noggin ▪ A sole plate • The construction of a lath and plaster and brick on edge infill partition walls. • The construction of steel frame partition walls
M8.10	**Timber frame housing:** Modern timber frame construction developed from North American and Scandinavian methods bears little resemblance to the heavy oak framed building of the middle ages. Modern timber frame houses are, in most cases, visually indistinguishable from their brick and block counterparts.	**Learners need to know:** • How to identify a timber frame constructed building. • The principals of timber frame construction. • The importance of vapour control. • External finishes used.
M8.11	**Internal joinery - Windows:** Internal joinery normally comprises of windows, doors and stairs. Some buildings will have decorative wood panelling and embellishments. Skirting boards at the base of walls would also be classified as internal joinery.	**Learners to know:** • **Windows:** There are different types of window and terminology associated with the components of them. • Casement windows: ▪ Mullion ▪ Transom ▪ Fixed light ▪ Side hung casement ▪ Top hung light ▪ Throating and its purpose in a sash ▪ Window reveal

		• Vertical Sash (Box frame) Windows: ▪ Box frame ▪ Pulleys and cords ▪ Sash weights ▪ Parting bead ▪ Staff bead ▪ Top sash ▪ Bottom sash ▪ Window board ▪ Window lining ▪ Window reveal ▪ Architrave • Window sills. A sill is necessary at the bottom of windows to ensure that water is removed at the base and not allowed to gain entry into the wall beneath. ▪ Throating/drip groove beneath the front edge of a sill to prevent water run back. ▪ The requirement for sub Sills ▪ Stone/concrete sills ▪ Tile sills
M8.12	**Internal joinery – doors and door frames:** Internal joinery normally comprises of windows, doors and stairs. Some buildings will have dado panelling, decorative wood panelling and other embellishments. Skirting boards at the base of walls would also be classified as internal joinery.	**Learners to be aware of:** • **Doors:** Depending upon their function and position in a building a door should have some or all of the following characteristics: ▪ Strength and Stability ▪ Weather tightness (external doors) ▪ Security ▪ Privacy ▪ Thermal insulation ▪ Fire resistance/Fire door ▪ Sound insulation • **Door linings/frames:** Terminology associated with a door frame

		▪ Architrave ▪ Door lining (usually for internal doors) ▪ Door stop ▪ Hanging side ▪ Closing side ▪ Door frame (usually for an external door)
M8.13	**Internal plaster work:** The function of internal plaster is to cover irregularities in brick or stone walls and other materials covering openings such as ceilings etc. to provide a suitable surface for decoration. Modern plasters can be used to improve the thermal insulation of a building, improve fire resistance and mitigate the effects of condensation. Specific types of plaster can also be used to help prevent damp penetration and control the transference of contaminants to the decorative surface. Different types of plaster are also used to form decorative embellishments	**Learners to be aware of:** • Modern Lightweight Gypsum based plasters. Undercoats (Browning, Bonding, Toughcoat, Hardwall) and finishing coats (Finish, Multi-finish and Boards finish) Circumstances where these materials are used and the reason not to use them in a damp situation. • Difficult backgrounds. What is meant by suction. Why too much suction can be a problem. How to retard suction. When to use galvanised or stainless steel expanded metal lath. • The performance requirements of materials used to re-plaster a masonry wall that has been affected by rising damp. • Fibrous plastering – where and how it is used.
M8.14	**Internal incoming services:** The incoming internal services in a building are most commonly water, heating and gas. In the event of an accident, before any work commences it is important to identify each of the incoming services and locate the point at which all of the incoming service may be safely turned off	**Learners to be aware of:** • Common places in a property where the water stopcock is present and the external position where incoming water may be turned off. • Common places in a property where the electrical fuse board is located and how to turn off the incoming main switch. • Common places in a property where the gas meter is present and how to turn off the incoming gas supply.

M9 - Module 9.0 – Treatment Application Plant and Equipment		
The apprentice will need to know about application plant and equipment commonly used in the Timber and Damp treatment Industry. They must be familiar with simple servicing requirements for various items and be able to recognise potential faults and hazards associated with such equipment. Following completion of this module an apprentice should be able to set up and use safe treatment application equipment and carry out routine day to day servicing requirements on such equipment when necessary.		
Ref	**Practical**	**Knowledge**
M9.01	**The electric spray/injection pump.** • Select and wear appropriate PPE. • Visually check the cable, plug and all electrical parts of the pump and transformer for damage or defects. • Check PAT is in place and in date • Know damage reporting procedure. • Position pump on drip tray in suitable position. • Visually check for damage/weakness/ballooning delivery hose/injector hose. • Attached spray lance/injector(s). • Position 25 litre drum of ready to use material on drip tray adjacent to pump using appropriate manual handling techniques. • Visually check for damage suction strainer, suction and return hose. • Insert suction and return hose into 25 litre drum of ready to use material so that the ends are resting on the base of the drum. • Plug transformer into power source and plug pump into transformer.	**Learners will know:** • Correct and suitable PPE to wear when setting up an electric spray/injection pump for use. • How to visually appraise the electrical components of a pump for damage. • How and to whom damage is reported. • Where and where not to set up a pump. • How to visually appraise delivery hose/injector hose for damage. • How to visually check for damage suction strainer, suction and return hose. • How to visually check a 110v transformer for damage. • How to identify the source of a leak in the pump or its attachments. • Know how to change/service: ▪ Suction strainer ▪ Suction hose ▪ Return hose ▪ Delivery hose ▪ Snap on socket and tail

	• Insert spray lance/injector into open 25 litre drum of ready to use material and turn on pump. • Discharge spray lance/injector into 25litre drum, run for a short period and check pump and delivery hose for leaks. • Be trained how to change/service: ▪ Suction strainer ▪ Suction hose ▪ Return hose ▪ Delivery hose ▪ Snap on socket and tail • Should leaks be evident and the repair is within your trained capability carry out the repair. • If leak is beyond your repair capability report defect and use another pump. • Understand the different pressures required for different products to be applied using an electric pump. • If no leaks are apparent proceed with use of pump.	• How to regulate the different pressures required for different products to be applied/introduced using an electric pump.
M9.02	**Delivery/return hose and connectors for an electric spray/injection pump:** • Select and wear appropriate PPE. • Visually check delivery hose/injector hose for damage – weakness - ballooning. • Check male and female snap on sockets parts for signs of wear. • When in use regularly check male and female snap on sockets parts for signs of leakage.	**Learners to know:** • The type of PPE required when handling delivery hose that has been used. • How to visually appraise delivery/injector hose and recognise damage, weakness and ballooning. • How to recognise wear in snap on socket parts. • How to correctly and safely renew male and female snap end connectors.

	• Correctly attach delivery/return hose to a fitting using a jubilee clip.	• How to correctly use and fit a jubilee clip.
M9.03	**Trigger assembly, Spray lance, Stair back spray and nozzles:** The application of a Timber Treatment Product utilises various attachments for use in conjunction with an electric spray/injection pump and a pneumatic pump. • Select and wear the appropriate PPE. • Recognise a treatment application situation that requires an adaptation of application equipment and select the appropriate application method. • Correctly use appropriate spanners and grips to execute repair. • Change washers/trigger valve in a trigger assembly where practical. • Renew lance washers. • Using appropriate washers attach a lance tube on to a trigger assembly. • Using appropriate washers attach a 45º elbow onto the end of a lance tube. • Using appropriate washers attach an adjustable nozzle onto the end of a 45º angle bend (elbow). • Using appropriate washers attach a Fan Spray Nozzle onto the end of a 45º angle bend (elbow). • Using appropriate washers attach a 2'/3'/4'/6' lance extension tube on to a standard lance tube. • Remove lance tube and using appropriate washers attach a stair Back Spray Nozzle to a Trigger Assembly.	**Learners to know how to:** • Identify the circumstances and situations that require an adaptation of application equipment. • Dismantle a trigger assembly, renew washers and reassemble to prevent leakage. • Remove and attach in a safe leak proof manner various adaptations that may be required to a trigger assembly.

	• Remove spray nozzle from end of 45º angle bend (elbow) and using appropriate washers attach a Worm Hole Nozzle.	
M9.04	**Damp course pressure injector rods and controls:** The injection of a high/low pressure chemical damp proof course makes use of various attachments for use in conjunction with an electric spray/injection pump. • Select and wear the appropriate PPE. • Recognise the situation or circumstance and select the appropriate application method. • Have appropriate spanners available. • Check for leaks and repair as required a 4/6 way manifold assembly. • Correctly attach delivery/return hose to a fitting using a jubilee clip. • Change washers/trigger valve in a trigger assembly where practical. • Using appropriate washer attach a damp course injector rod to a trigger assembly. • Completely dismantle and reassemble a damp course injection rod.	**Learners to know how to:** • Identify circumstances and situations that require an adaptation of application equipment. • Dismantle trigger assembly, renew washers and reassemble where practical. • Remove and attach in a safe leak proof manner the various adaptations that may be required to a trigger assembly. • Strip down and reassemble an injector rod.
M9.05	**Hand held caulking gun:** A hand held caulking gun may be used for the application of a timber treatment or rising damp treatment product. • Select and wear the appropriate PPE for the task.	**Learners to know:** • The appropriate caulking gun and nozzle for the task. • How to strip down and change the internal seal. • How to safely introduce material to be applied into the barrel.

	• Recognise the situation or circumstance and select the appropriate caulking gun and nozzle for the task. • Attach appropriate nozzle. • Be able to strip down gun and renew the internal seal. • Insert material to be applied into the barrel of the gun. • As dictated by material used clean gun and nozzle upon completion of task.	• How to apply the material from the gun in a safe controlled manner.
M9.06	**Pneumatic sprayers:** Pneumatic sprayers may be used for the application of a timber or rising damp treatment product. • Select and wear the appropriate PPE for the task. • Recognise the situation or circumstance and select the appropriate delivery hose, lance or injector for the task. • Visually check the tank, fittings and delivery hose for damage. • Fit a new length of delivery hose onto the tank an fit trigger assembly onto the end of the delivery hose • Avoiding spillage safely introduce product into the tank reservoir. • Correctly use a spill control pack and dispose of waste. • Use different pressures required for different products to be applied using a pneumatic sprayer.	**Learners to know:** • Be able to recognise when a task is suitable for the use of a pneumatic sprayer. • How to attach different nozzles and injectors to the end of the delivery hose. • How to renew the delivery hose and attach a trigger assembly. • How to use a spill control pack and safely and correctly dispose of used material. • Understand why the different pressures are required for different products to be applied using a pneumatic sprayer.

M9.07	**Transformers and Safety Lighting:** Building preservation work often takes place is dark or poorly lit areas. The lighting of these areas combined with the nature of some materials and the means by which they are applied will, in some circumstances, create a hazardous situation unless safety lighting is used. • Visually check 110v transformer and its cable and plug for damage or fault. • Check for PAT certificate • Visually check safety light body, cable and plug for damage or fault. • Identify power supply away from treatment area and plug in transformer. • Plug safety light into transformer. • Provide temporary secure fixing or fixings for safety light(s) to enable work area to be adequately lit in order to perform the task safely.	**Learners to know:** • How to visually appraise a transformer and safety light for damage or faults. • What Portable Appliance Testing (PAT) involves. • When damage or a fault is significant. • The reason why power is obtained outside the treatment area. • Why safety lighting is necessary. • How to safely secure safety lighting

M10 - Module 10.0
Small Hand and Power Tools

This module will provide an awareness of the hazards associated with construction site equipment. It will show the apprentice how to recognise the hazards of different types of tools and the safety precautions required to prevent those hazards. A specialist trainer will carry out the training in line with current legislation and industry approved methods and procedures. This will include an official abrasive wheels course. The apprentice will be issued with a certificate of attendance on successful completion of this module.

Ref:	Practical	Knowledge
M10.01	The practical training will focus on the correct use and maintenance of: • Hand tools including sharp edge tools • Generators • Hand held power tools • Angle grinders (abrasive wheels) • Cut off Saw • Nail guns • Difference between 110v and 240v	**Learners need to be aware of:** • The hazards posed by and associated with hand held power tools. • How to safely use a generator. • How to safely use all tools identified in the practical element. • Electricity voltage • Understand the need to be adequately trained in use of specific equipment (e.g. chain saw, abrasive wheels)

M11 - Module 11.0 **Wood Boring Insects**		
This Knowledge based module will equip the apprentice with a knowledge and understanding of the most commonly encountered wood boring insects found in the UK in the built environment. Following completion of this course an apprentice will be aware of the commonly encountered wood boring insects found in the UK and their specific requirements for establishment and survival.		
Ref:	**Knowledge**	
M11.01	Wood boring insect life cycle	**Learners need to be aware of:** • The basic structure of an insect. • How wood boring insects distribute. • The four stages of a wood boring insect life cycle. • The vulnerable stages of its life cycle that are exploited for its control. • That different insects attack different types of wood.
M11.02	Common Furniture Beetle	**Learners need to be aware of:** • The distribution of the insect in the UK • What it looks like. • Type and part of wood that it infests. • Characteristic identification methods • Type of damage caused and what it looks like
M11.03	Wood Boring Weevil	**Learners need to be aware of:** • The distribution of the insect in the UK • What it looks like. • Type of wood that it infests. • Characteristic identification methods. • Type of damage caused and what it looks like. • No direct control is necessary
M11.04	Death Watch Beetle	**Learners need to be aware of:**

		• The distribution of the insect in the UK • What it looks like. • Type of wood that it infests. • Characteristic identification methods. • Type of damage caused and what it looks like. • Specific control measures required in addition to conventional control.
M11.05	House Longhorn Beetle	**Learners need to be aware of:** • The distribution of the insect in the UK • What it looks like. • Type of wood that it infests. • Characteristic identification methods. • Type of damage caused and what it looks like. • Specific control measures required in addition to conventional control. • Dangers associated with infestation.
M11.06	Bark Boring Beetle	**Learners need to be aware of:** • The distribution of the insect in the UK • What it looks like. • Part of wood that it infests. • Characteristic identification methods. • Type of damage caused and what it looks like. • No direct control is necessary
M11.07	Lyctus powderpost beetle	**Learners need to be aware of:** • The distribution of the insect in the UK • What it looks like. • Type of wood that it infests. • Characteristic identification methods. • Type of damage caused and what it looks like.

M12 – Module 12.0 **Control of Wood Boring Insects**		
This Knowledge based module will inform the apprentice of the means by which the control of wood boring insects is achieved by the correct application of an insecticide applied to timber. The differing properties of materials used will be explained.		
Ref:	**Knowledge**	
M12.01	**The means by which the control properties of different types of timber treatment insecticides work should be understood.**	**Learners need to be aware of:** • And familiar with the PCA Code of Practice for Remedial Timber Treatment. • What is meant by the term ‘carrier’. • Different carriers - the positive and negative points of the different types: ▪ Water carrier ▪ White spirit (solvent) carrier ▪ Monoethylene and monopropylene glycol carrier. • Different types of active ingredient. Which one is a contact killer and which is a stomach poison. ▪ Permethrin & Cypermethrin ▪ Flurox ▪ Disodium octoborate tetrahydrate (Boron) • The importance of correct loading of the active ingredient on the timber and the persistence properties of the active ingredient. • How and at what stage of a wood boring insect’s life cycle the active ingredients work. • The difference between preventative treatment and eradication.

M13 - Module 13.0 **Wood Rotting Fungi and its Control**		
This Knowledge based module will equip the apprentice with an understanding of common wood rotting fungi found in the UK in the built environment. Following completion of this half day course an apprentice will be aware of the commonly encountered wood rotting fungi found in the UK and their specific requirements for establishment survival and control.		
Ref:	**Knowledge**	
M13.01	• Understand the life cycle of fungi (wood rotting fungi). ▪ What is a spore, where do they come from, how are they distributed. ▪ What germination means. ▪ The requirements for germination of a spore. ▪ Hyphae and mycelium growth. ▪ Sporophore (fruiting body) formation and its function.	**Learners need to be aware of:** • Terms used to describe the various stages of wood rotting fungi. • The basic requirements for germination to take place. • How growth occurs and requirements to sustain growth. • How fungi reproduces.
M13.02	• **Dry Rot (*Serpula lacrymans)*** ▪ There is only one Dry Rot. ▪ Requirements for germination and establishment. ▪ What its mycelium growth looks like. ▪ What the damage to wood looks like. ▪ How to recognise damage and potentially concealed damage. ▪ Sporophore formation and what it looks like	**Learners need to be aware of:** • There is only one Dry Rot. • Understand the relationship between the moisture content of wood and the potential for spore germination. • Understand how wood may become damp in a building and the potential consequences. • What Dry Rot mycelium growth and Sporophore looks like. • The type of damage caused to wood. • How it is able to grow over and through inert materials such as brick, concrete, rubble.

	▪ Ability to grow over and through inert materials.	
M13.03	• **Wet Rots** ▪ All other wood rotting fungi are classified as Wet Rots. ▪ Requirements for germination and establishment. ▪ What *Coniophora puteana* (a brown rot) mycelium growth looks like. ▪ What the damage to wood caused by a brown rot looks like. ▪ How to recognise damage to wood ▪ Sporophore formation.	**Learners need to be aware of:** • If it is not Dry Rot then all other wood rotting fungi are classified as a Wet Rot • Understand the relationship between the moisture content of wood and the potential for spore germination. • Understand how wood may become damp in a building and the potential consequences. • What the most commonly encountered wet rots in a building looks like. • The most common form of damage caused to wood.
M13.04	• **The control of wood rotting fungi** ▪ Be familiar with the PCA Code of Practice for Remedial Timber Treatment. ▪ Be familiar with the Primary and Secondary control measures for dealing with wood rotting fungi.	**Learners need to be aware of:** • The PCA Code of Practice and its contents. • The significance of moisture and the need to control or eliminate it when dealing with wood rotting fungi. • The need to ventilate as well as dry timber.

M14 - Module 14.0
Preparation for the application of a timber treatment product(s) and masonry biocide.

This module is designed to provide the apprentice with the basic skills necessary to prepare for the safe preparation of treatment products prior to application. When combined with on the job training supported by the employer it will lead to full competence in all aspects of the preparation necessary for the application of treatment products in buildings.

Ref:	Practical	Knowledge
M14.01	**Personal Protection Equipment (PPE)** • Select, fit and use the appropriate PPE. • Be aware of and subjected to a face fit test associated with respirators. • Maintain PPE - identify and report defects • Store PPE in suitable accommodation. • Dispose of contaminated PPE in a correct manner.	**Learners need to know:** • The correct PPE to wear appropriate to the task and understand storage, maintenance and employer damage reporting procedures for: ▪ Safety footwear ▪ Safety gloves ▪ Safety eyewear ▪ Respiratory Protective Equipment (the importance of face fit tests) ▪ Dust masks ▪ Knee protectors ▪ Hearing protectors ▪ Hard hats ▪ High visibility clothing ▪ Overalls and waterproof clothing ▪ Sun protection
M14.02	**Barriers and signage:** As required and dictated by site circumstances select and erect correct barriers and signage to working area to warn others and prevent access from unauthorised persons.	**Learners need to be aware of:** • The legal obligations to protect themselves, other trades on site and members of the public from injury and the area of treatment from unauthorised access. • Understand the special dangers of working at height. • The correct range of warning signs that should be available. • When and where to deploy warning signs. • When and where to deploy temporary barriers and warning tapes to section of areas of work.

M14.03	**Scaffolding:** Check that the type of scaffold supplied is suitable for the type of work being carried out. Tower scaffolds must comply with the standard required for all types of scaffolds, *e.g.* double guardrails, toe boards, bracing and access ladder. Hand-rails, full working platform, access (ladder or tower), all to be checked prior to use. Attend a recognised Prefabricated Access Suppliers' & Manufacturers' Association (PASMA) course.	**Learners need to be aware of:** • Working at Height Regulations 2005 • It is the scaffold users/hirers responsibility to ensure that all scaffolding has been inspected as follows: ▪ Following installation - before first use ▪ At an interval of no more than every 7 days thereafter ▪ Following any circumstances liable to jeopardise the safety of the installation *e.g*. high winds. • Scafftags and inspection by a competent person. • All scaffolding inspections should be carried out by an appropriately certificated person. • Any alterations to scaffolds can only be carried out by an appropriately certificated person • All mobile scaffold towers only to be erected by PASMA certified person • Know that anyone using Mobile Elevated Work Platforms (MEWPs) must be certificated

M14.04	**Manual Handling:** • Be able to adopt safe manual handling techniques, by practical application of lifting, pushing, and carrying of loads when: ***(See Module 4.0)*** ▪ Loading and unloading materials and equipment. ▪ Carrying, supporting or moving equipment, plant, materials and waste.	**Learners need to:** • Understand the correct handling techniques including task assessment, what mechanical aids are available and the types and causes of injury that may be caused if correct procedures are not followed.
M14.05	**Discovery of Bats** Be able to take the appropriate action in the event of Bats being discovered during the course of preparation and/or treatment.	**Learners to be aware of:** • The Wildlife and Countryside Act 1981 and its relevance. • Bats and their habitats are a protected - what protected species means. • Action to take and not to take in the event of discovering Bats or evidence of Bats *i.e*. Bat droppings. • Reporting procedures • Be aware of the need to comply with the requirements of the Statutory Nature Conservation Organisation (SNCO)
M14.06	**Risk Assessments, Method statements and Material Safety Data Sheets:** Read, understand and act upon as required: • Risk Assessments • Method Statements • Control of Substances Hazardous to Health (COSHH) assessments. • Material Safety Data Sheets (MSDS).	**Learners to be aware of:** • Risk Assessments and responsibility to review. • Method statements • COSHH and its relevance to the work they perform • MSDS, their relevance and importance.

M14.07	**Timber Treatment products and Biocide Labels** Understand and act upon the instructions provided on the label of a pesticide product.	**Learners to be aware of:** • Timber treatment/Biocide pesticide label. • The Control of Pesticides Regulations 1986 (COPR). • Treatment products have to be approved for use. • The body responsible for clearing the use and sale of timber treatment pesticides in the UK. • The essential and statutory content of a label. • Hazard warning signs. • Action to take in the event of a spillage, accident or ingestion.

M14.08	**Timber Product/Biocide Quantities**
	
	• Work out area to be treated.
	• Calculate the amount of timber treatment/biocide product that will be required in relation to a job.
		Learners need to know how to:
		
		• Work out the quantity of timber treatment product required to treat:
		  ▪ A roof void
		  ▪ A floor
		• When treating a roof or floor gauge application rate against quantity used to ensure correct coverage (loading).

M14.09	**Dilution of a concentrate timber treatment product or masonry biocide into its ready to use form:** • Dilute a concentrated product contained in a small container in accordance with the instructions on the product label. • Dilute a concentrated product contained in a soluble sachet in accordance with the instructions on the product label • Know how to use a spill control kit, take the appropriate action in the event of a spill of concentrate or ready to use pesticide and dispose of waste correctly. • Correctly label the dilute ready to use product.	**Learners need to know and be aware of:** • Suitable PPE to wear. • Adequate suitable containers available for ready to use product. • How to correctly dilute a concentrate timber treatment product. • Understand the label of the concentrate and dilute product. • The correct label to use on a dilute ready to use material container. • To have available and know how to use a Spill Control Kit. • How to dispose of contaminated waste material (Spill Control Kit). • Manual handling of 25 litres of dilute product.

M15 - Module 15.0 –
Exposure of a Dry Rot Outbreak

A dry rot outbreak often has to be exposed before an estimate is able to be prepared or works commence. This module should equip the apprentice with the skill and knowledge necessary to expose an established dry rot outbreak.

Ref	Practical	Knowledge
M15.01	**Expose a dry rot outbreak:** • Interpret plans and written instructions; identify areas where exposure work is required. • Carry out all relevant preparation and precautions as required in accordance with ***Module 3.0***. • Interpret and understand instructions and the extent of opening up permitted. • Adequately screen of areas where exposure will take place to contain dust. • Recognise Dry Rot affected timber, hyphae and mycelium growth over and in masonry. • Remove plaster, floorboards, architraves, linings, ceilings etc. as stipulated in exposure specification. • Causing minimal damage, discretely dismantle/open up joinery fitments for examination. • Remove wall plaster to form exposure strips in search of embedded timber. • Expose embedded timbers by removal of masonry without affecting structural stability of the wall or timber.	**Learners will know:** • Correct and suitable PPE to wear. • How to identify areas where concealed embedded timbers may be present. • How to interpret instructions and the extent of opening up permitted. • Be familiar with the biology and capabilities of Dry Rot. • Select a suitable and appropriate location or locations for exposure strip(s). • How to safely expose timbers embedded in a masonry structure. • How to drill embedded timbers in order to assess their internal/concealed structural integrity. • What action to take if timbers or items exposed are considered to be a hazard or danger to others. • What action to take when the structural integrity of exposed support timbers or masonry has been compromised and represents a danger to others and the building fabric.

	• Drill embedded large dimension timbers to assess their internal condition. • Conduct an inspection using a torch and mirror. • Safely open up embedded timbers, joist ends etc. for inspection. • Recognise situations when temporary/safety shoring is necessary. • Be capable of taking photographs of the exposed items. • Clean up debris and remove from site to a designated waste disposal facility	

M16 – Module 16.0
The application of timber treatment products to in-situ timbers in a building.

This module is designed to provide the apprentice with the basic skills necessary to safely apply timber treatment products to in situ timbers within a building. When combined with on the job training supported by the employer it will lead to full competence in all aspects of the preparation necessary for the application of a timber treatment products to in-situ timbers within a building.

Ref	Practical	Knowledge
M16.01	**Prepare and apply treatment to timbers within a roof void:** • Carry out preparation in accordance with ***Module 14.0*** • Be familiar with the PCA Code of Practice for Remedial Timber Treatment. • Consider and be aware of Confined Space Regulations. • Provide safe access into the roof void. • Wear suitable and correct PPE. • Deploy appropriate warning notices. • Erect adequate safety splash proof lighting. • Provide sufficient secure walkways for access. • Adequately cover and protect any open water tanks. • Make roof and ceiling timbers available by lifting boards, opening partitions etc. and clean down timber surfaces to remove dust. • Turn off/isolate/protect any electrical appliance or electrical circuit in the roof void.	**Learners need to know:** • How to secure and fix safe access into the roof void. • Select and wear suitable and correct PPE for the task in hand. • When and where to deploy appropriate warning notices. • How to safely and correctly install adequate safety splash proof lighting. • Secure safe walkways for access. • Cover and protect any open water tanks. • Lift boards, open partitions etc. in order to gain access to timber surfaces within the roof void. • Different procedures to deal with insulation materials to facilitate access. • Clean timber surfaces to an acceptable level ready to receive treatment. • Identify any electrical appliance or circuit in the roof void and take appropriate isolation action. • Set up fully functional timber treatment application equipment. • Ensure there is adequate ventilation during treatment process.

	• Prepare sufficient Timber Treatment Product. • Prepare suitable fully functional timber treatment application equipment. • Move insulation material as required to facilitate treatment application. • Ensure there is adequate ventilation during treatment process. • Prepare and apply product correctly in accordance with the manufacturer's instructions at the prescribed application rate.	• Dilute and prepare treatment product correctly and apply in accordance with the manufacturer's instructions at the prescribed application rate.
M16.02	**Prepare and apply a timber treatment product to a timber floor at upper floor levels:** • Carry out preparation in accordance with ***Module 14.0.*** • Be familiar with the PCA Code of Practice for Remedial Timber Treatment. • Make floor available. • Wear suitable and correct PPE. • Deploy appropriate warning notices, signage and barriers. • Lift square edge, tongue and groove floor boards. • Spring and correctly cut a full length floor board. • Be aware of how many floor boards to lift and at what centres. • Check for sub-floor obstructions e.g. strutting, trimmers etc.	**Learners need to know:** • The appropriate care necessary, if required, to raise floor coverings in order to make floor available. • What is suitable and correct PPE to wear for the tasks in hand. • When and where to deploy appropriate warning notices, signage and barriers. • Without causing unnecessary damage how to lift square edge, tongue and groove floor boards. • Without causing unnecessary damage how to spring and correctly cut a previously uncut full length floor board. • The number of floor boards that need to be lifted and at what centres to apply treatment properly. • What to look for and how to check for obstructions e.g. strutting, trimmers etc. • Appropriate action to take in the event of obstructions being present. Including sound insulation.

	• Turn off/isolate/protect any electrical appliance or circuit in the room and sub floor void space. • Prepare sufficient Timber Treatment Product. • Have available suitable fully functional timber treatment application equipment. • Ensure there is adequate ventilation during treatment process. • Prepare and apply treatment product correctly in accordance with the manufacturer's instructions at the prescribed application rate. • De-nail exposed joists. • Identify locations of any services (Gas, Water, Electric) prior to and during reinstatement and avoid. • Reinstate and fix down previously raised floor boards. • Cut and introduce new floor boards if required.	• How to identify any Gas, Water or Electric appliance or circuit in the room and sub floor space and take the appropriate actions to isolate/protect/ avoid accordingly. • How to prepare and assemble suitable fully functional timber treatment application equipment. • Make a judgement if there is adequate ventilation. • How to prepare and apply treatment product correctly in accordance with the manufacturer's instructions at the prescribed application rate. • Gauge application rate against quantity used to ensure correct coverage (correct loading). • Reinstate raised floor boards. • Measure, cut and introduce new floor boards if required

M16.03	**Prepare and apply timber treatment product to a suspended timber floor at ground floor level.** • Carry out preparation in accordance with ***Module 14.0***. • Be familiar with the PCA Code of Practice for Remedial Timber Treatment. • Make floor available. • Wear suitable and correct PPE. • Deploy appropriate warning notices. • Lift square edge, tongue and grove, floor boards. • Spring and correctly cut a full length floor board. • Where and how many floor boards to lift and at what centres. • Clean down wall plates/sleeper wall plates. • Turn off/isolate/protect any electrical appliance or circuit in the room and sub floor void space. • Prepare sufficient Timber Treatment Product. • Prepare suitable fully functional timber treatment application equipment. • If treatment is to take place from a sub floor void: (this should only take place if two technicians are on site). ▪ Consider and be aware of Confined Space Regulations ▪ Ensure it is safe to do so.	**Learners need to know:** • What is suitable and correct PPE to wear for the tasks in hand. • The appropriate care necessary, if required, to raise floor coverings in order to make floor available. • When and where to deploy appropriate warning notices, signage and barriers. • Without causing damage how to lift square edge, tongue and grove, floor boards. • Without causing unnecessary damage how to spring and cut a previously uncut full length floor board. • The number of floor boards that need to be lifted and at what centres to apply treatment properly. • What to look for and how to check for obstructions e.g. strutting, trimmers etc. • Appropriate action to take in the event of obstructions such as insulation and sound deadening being present. • How to identify any Gas, Water or Electric appliance or circuit in the room and sub floor space and take the appropriate actions to isolate/protect/ avoid accordingly. • How to prepare and assemble suitable fully functional timber treatment application equipment. • Make a judgement if there is adequate ventilation. • How to prepare and apply treatment product correctly in accordance with the manufacturer's instructions at the prescribed application rate.

	▪ Ensure there is safe adequate access and egress. ▪ Ensure there is adequate ventilation during treatment process by raising other boards as necessary. ▪ Ensure an evacuation plan is in place in the event of the person applying the treatment being in difficulty/incapacitated and all parties concerned are aware of the plan. • Prepare and apply product correctly in accordance with the manufacturer's instructions at the prescribed application rate. • Identify locations of any services (Gas, Water, Electric) prior to and during reinstatement and avoid. • Reinstate and fix down previously raised floor boards. • Introduce new floor boards if required.	• Gauge application rate against quantity used to ensure correct coverage (correct loading). • Reinstate raised floor boards. • Be able to measure, cut and introduce new floor boards if required. • Precautions required if treatment is to take place from a sub floor void: ▪ Ensure it is safe to do so. ▪ Only undertake if two people are present. ▪ What is meant by safe adequate access and egress. ▪ What is adequate ventilation during treatment process and how to achieve it (raising other boards). ▪ Ensure that all parties concerned are aware of an evacuation plan is in the event of the person applying the treatment being in difficulty and/or incapacitated.
M16.04	**Prepare and apply timber treatment product to a timber staircase.** • Carry out preparation in accordance with ***Module 14.0*** • Be familiar with the PCA Code of Practice for Remedial Timber Treatment. • Make staircase available by lifting any top covering. • Wear suitable and correct PPE. • Deploy appropriate warning notices.	**Learners need to know:** • If required, the appropriate care necessary to raise any coverings on a staircase in order to make stair surface available. • What is suitable and correct PPE to wear for the tasks in hand. • When and where to deploy appropriate warning notices, signage and barriers. • How to turn off/isolate/protect any electrical appliance, circuit or equipment in the vicinity of the staircase. • If a soffit is present the centres to drill risers and how to use a stair back spray nozzle.

	• Clean down accessible exposed top and underside timber surfaces of staircase. • Turn off/isolate/protect any electrical appliance, circuit or equipment in the vicinity of the staircase. • Prepare sufficient timber treatment product. • Prepare suitable fully functional timber treatment application equipment. • If no soffit is present apply Timber Treatment Product in accordance with manufacturer's instructions to the exposed unpainted timber surfaces of the staircase. • If a soffit is present (standard stair case): ▪ Drill two 10 mm holes in all risers at appropriate centres. ▪ Attach stair back spray nozzle to trigger assembly attached to pump. ▪ Activate/pressurise pump, insert stair back spray nozzle into each hole, squeeze trigger and rotate left and right for 5 seconds.	

M16.05	**Apply timber treatment products to difficult to access and embedded timbers.** • Carry out preparation in accordance with ***Module 14.0***. • Wear suitable and correct PPE. • Deploy appropriate warning notices. • Clean down accessible exposed timber surfaces to be treated. • Turn off/isolate/protect any electrical appliance, circuit or equipment in the vicinity of the treatment. • Prepare sufficient timber treatment product. • Prepare suitable fully functional timber treatment application equipment. • Assess access situation and arrange for safe access to be provided. ***(See module 14.03 if relevant)*** • For difficult to access timbers requiring spray treatment application: ▪ Attach and use appropriate length spray lance extensions as required. ▪ Adapt as necessary and use stair back spray nozzle. • For embedded timbers requiring treatment:	**Learners need to know:** • How to provide/arrange for safe working access. • What is suitable and correct PPE to wear for the tasks in hand. • When and where to deploy appropriate warning notices, signage and barriers. • How to turn off/isolate/protect any electrical appliance, circuit or equipment in the vicinity of treatment. • How to attach and adapt different application equipment for the task in hand. ***(See Module 9.0)*** • How to safely expose embedded timbers. • How to use and apply/inject paste/gel timber treatment products. • How to drill embedded timbers and assess the structural integrity of the timber being drilled.

	▪ Be familiar with and know how to safely use and apply paste/gel timber treatment products in accordance with the manufacturer's instructions. ***(See Module M18.0)*** ▪ If safe and practical to do so expose embedded timbers in accordance with specification and apply specified treatment. ▪ If exposure is not possible drill correct size holes into embedded timbers at correct centres, angles and depths in accordance with the specification and introduce specified timber treatment product into pre drilled holes.	

M17 – Module 17.0
The Application of a Masonry Biocide

When dealing with a Dry Rot outbreak in a building it is very often necessary to apply a biocide to masonry over and through which Dry Rot fungus may have grown. This module will provide the apprentice with the requirements necessary to contain the growth within a masonry wall as part of Dry Rot eradication treatment

Ref	Practical	Knowledge
M17.01	• Interpret plans and written instructions and identify area of work. • Carry out preparation as required in accordance with ***Module 14.0.*** • Take appropriate measures to contain dust and ventilate work area. • Hack off wall plaster in accordance with the specification to expose the extent of fungal spread or as fungal growth exposed dictates. • Be fully conversant with the safe use of a Club/Lump hammer, bolster and cold chisel. • Be fully conversant with the use of an electrical hammer chisel. • Examine exposed masonry and identify Dry Rot hyphae/mycelium growth. • Identify different waste materials, segregate as necessary, bag up and store safely ready for disposal. • Collect, contain and dispose of waste correctly at a designated waste disposal facility. • Prepare sufficient masonry biocide in accordance with ***14.8.***	**Learners need to:** • Understand written instructions and sketch plans outlining area or areas of work. • Be familiar with and carry out all necessary preparation and precautions as set out in ***Module 14.0***. • Identify and wear the correct PPE for the tasks. • Know how to screen off areas to contain dust. • Safely hack off wall plaster in accordance with specification. • Be aware of notification procedures necessary in the event of further/extended growth of dry rot extending beyond those identified in the report/specification • Be aware of all hazards associated with the use of a club/lump hammer, chisel, bolster and electric hammer chisel and take appropriate action to minimise the risk of injury. • Be able to identify Dry Rot hyphae and mycelium growth on/in masonry. • Be aware of waste segregation requirements.

	• Have available suitable fully functional application equipment. • Ensure there is adequate ventilation during application process. • Apply biocide correctly to the exposed masonry in accordance with the manufacturer's instructions at the prescribed application rate.	• Dilute appropriate quantity of a biocide and know how to use a spill control kit should it be required. • How to set up suitable application equipment and use safely.

M18 – Module 18.0
Preparation for and the application of Paste and Gel type Timber Treatment Products

There are many circumstances and situations that require the application of a paste or gel type of timber treatment products on to and into in situ timbers. This module is designed to provide the apprentice with the skills and understanding necessary to successfully apply this type of timber treatment product.

Ref	Practical	Knowledge
M18.01	**Apply a Paste or Gel type of timber treatment product on to in situ timber** • Interpret plans and written instructions; identify area(s) of work and timber(s) schedule for treatment. • Carry out all preparation and precautions as required in accordance with ***Module 14.0.*** • Read, understand and comply with product label. • Adequately expose target timber(s) • Apply paste/gel type timber treatment product on to the target timber in accordance with manufacturer's instructions. • Be aware of the hazard when applying these types of materials above one's head – avoid this if possible.	**Learners need to:** • Understand the specification, written instructions and sketch plans outlining the area or areas of work and timber(s) schedule for treatment. • Be familiar with and carry out all necessary preparation and precautions as set out in ***Module 14.0.*** • Wear suitable and correct PPE. • Be aware of requirements and stipulations contained on the product label and act accordingly. • Be aware of timber moisture content and its relevance to the application of a Paste type of timber treatment product. • Know how to safely expose target timber(s). • Be aware of the slippery nature of these types of materials and take appropriate precautions particularly if applying material above one's head – avoid this if possible. • Know how to correctly and safely apply material using a brush or trowel. • Be aware of potential damage and staining on adjacent walls and ceilings.

M18.02	**Inject a Gel or Paste timber treatment product into in situ timber.** • Interpret plans and written instructions; identify area(s) of work and timber(s) schedule for treatment. • Carry out all preparation and precautions as required in accordance with ***Module14.0.*** • Read, understand and comply with product label. • Adequately expose target timber(s). • Drill into timbers that are to be injected using a suitable size drill bit to a depth and in a manner stipulated in the specification/work schedule/product manufacturer's instructions to achieve the desired loading of product per cubic metre of timber. • Prepare tube of product, attach supplied nozzle and, if required, nozzle extension. Insert into sealant/mastic gun. • Insert nozzle into the bottom of the predrilled hole in timber, squeeze sealant/mastic gun trigger and back fill hole with gel.	**Learners need to:** • Understand the specification, written instructions and sketch plans outlining the area or areas of work and timber(s) schedule for treatment. • Be familiar with and carry out all necessary preparation and precautions as set out in ***Module14.0***. • Wear suitable and correct PPE. • Be aware of requirements and stipulations contained on the product label and act accordingly. • Know how to safely expose target timber(s). • Know how to safely use an electric drill with wood bit attached. • Be aware of the nature of the Gel and Paste materials and take appropriate precautions particularly if applying material above one's head – avoid this if possible. • Know how to prepare product tube and attach nozzle/extension nozzle. • Know how to back fill predrilled holes in timber with gel or paste.

M19 - Module 19.0
Building Repairs

This module is designed to provide the apprentice with the basic skill to conduct building repairs often necessary in conjunction with a timber treatment programme. When combined with on the job training supported by the employer this should lead to full competence in safely and successfully completing commonly encountered building repairs.

Ref	Practical	Knowledge
M19.01	**Repair/renew floor boards.** • Interpret plans and written instructions; identify area(s) of work and timber(s) schedule for repair/renewal. • Carry out all relevant preparation and precautions as required in accordance with ***Module 3.0 and Module 14.0***. • Lift floorboards schedule for renewal and/or mechanically test floorboards to ascertain structural integrity and ascertain if renewal is necessary. • Measure dimensions of floor boards to be renewed and measure up for quantity required. • If not already available on site arrange for delivery or collect new floor boards. • Cut down to appropriate length and fit replacement floor boards. • Complete any treatment schedule for the floor in accordance with **M16.2/M16.3** above. • Nail down new floorboards and any other disturbed boards	**Learners need to know how to:** • Understand the specification, written instructions and sketch plans outlining the area or areas of work and timber(s) schedule for renewal. • Be familiar with and carry out all necessary preparation and precautions as set out in ***Module 3.0 and Module 14.0***. • Wear suitable and correct PPE. • Lift square edge and tongue and grove, floor boards without causing unnecessary damage. • Spring and correctly cut a previously uncut full length floor board without causing unnecessary damage. • Mechanically test floor boards to assess their structural integrity. • Measure up, order and take delivery of the correct quantity and size of new floor boards required to match adjacent original floorboards. • Cut to length new floor boards • Safely secure floor boards to joists.

M19.02	**Repair/renew decayed joist end(s) and wall plate.** • Interpret plans and written instructions; identify area(s) of work and timber(s) schedule for repair/renewal. • Carry out all relevant preparation and precautions as required in accordance with ***Module 3.0 and Module 14.0***. • Ensure safe working at height where applicable • Lift floorboards/make decayed joist end(s)/wall plate schedule for repair/renewal accessible. • As required provide temporary safe support to a floor. • Cut back decayed joist end(s) and introduce new joist alongside remaining original joist – using existing bearing surfaces. Protect newly introduced timber from direct contact with masonry using DPC material in an appropriate manner • Cut back decayed joist end(s) as specified. Correctly bolt on new joist end to remaining original joist section using the correct number and spaced M12 bolts/studding, nuts, square plate washers and appropriate size double sided timber connectors. Form new opening in wall to support new joist end. New end to be supported by wall protected from direct contact with masonry using DPC material in an appropriate manner. • Cut back decayed joist end(s) and correctly bolt on new joist end to remaining original joist section using the correct number and spaced M12 bolts/studding, nuts, square plate washers and	**Learners need to know how to:** • Interpret plans and written instructions. • Wear suitable and correct PPE. • Deploy appropriate warning notices and barriers and consider if work at height regulations are applicable and appropriate measures that may be required • Identify any Gas, Water or Electric appliance or circuit in the room and sub floor space and take the appropriate actions to isolate/protect/avoid accordingly. • Provide temporary support to floor, partitions, stairs, hearths etc. as required. • Lift and set aside floor boards and/or remove section of ceiling to form working access. • Clear over site of timber debris. • Repair/construct sleeper walls/brick piers and form adequate footings for same. • Measure up and order correct quantities of correct size sub floor timber to enable repair. • Use a right angle drill to form bolt holes in joists. • Use and fix M12 bolts/studding, nuts, square plate washers and appropriate size double sided timber connectors at correct spacing, edge and end distance in a new joist end bolt on circumstance. • Secure joist hanger to wall supporting a new joist end. • Brick up extracted wall plate void in a brick wall using bricks and/or a reinforced concrete lintel.

	appropriate size double sided timber connectors. New joist end to be supported by a joist hanger. • Cut back decayed joist end(s) and correctly fix prefabricated joist connecting repair plates on to cut back joist end(s) in accordance with manufacturer's instructions. • Introduce an adequately sized timber/steel carrier beam as stipulated in the specification beneath and adjacent to decayed joist ends. Ensure that the ends of the support beam are adequately supported and sufficient for the load. Ends of timber support beam are to be physically protected from direct contact with masonry using DPC material in an appropriate manner. Cut back decayed joist ends so that they bear on to the newly introduced timber/steel carrier beam. • Cut back decayed joist end, introduce a trimmer and correctly support cut back joist end on trimmer. • Form a recess in a wall to support a new joist end. • Jack up/lift/support floor and introduce DPC material beneath in situ timber joists/wall plates to protect from damp. • Renew decayed sleeper wall plate. • Extract decayed embedded wall plate and brick up resultant void. • Excavate oversite, prepare adequate footings and construct new brick piers to receive new wall plate bedded on DPC material.	• Form a recess in wall sufficient to receive a joist end, lintel, carrier beams, RSJs or other alternative support introduced. • Lift and support a floor or section of a floor to enable DPC material to be inserted beneath timber bearing surfaces. • Introduce new wall plate protected with DPC material as appropriate; make level in readiness to match with adjacent existing floor levels. • How to fix a trimmer and support cut back joist end on new trimmer section. • Assess trimmer load limitations. • How to fix other methods of joist end support such as angle iron, RSJs, concrete lintels etc. • The importance of isolating timber from direct contact with damp or potentially damp masonry.

M19.03	**Remove an existing timber floor and lay a new suspended timber floor at ground floor level.** • Interpret plans and written instructions; identify area(s) of work and floor(s) schedule for renewal. • Carry out all relevant preparation and precautions as required in accordance with ***Module 3.0 and Module 14.0***. • Ensure safe working at height where applicable • Identify Gas, Water and Electric services, pipes and cables beneath floor and take appropriate action as necessary to avoid disturbance or arrange for removal. • Lift existing floor boards, joists and wall plates and correctly dispose of. • Clear oversite of all timber debris. • Clean out existing sub floor air vents. • Introduce new sub floor air vents as stipulated in the specification. **(See M19.07)** • As necessary repair/construct sleeper walls/brick piers. • Measure up and order correct quantities of correct size top floor timbers/chipboard flooring and sub floor timbers. • Introduce new wall plates bedded on DPC material, make level in readiness to match new floor with adjacent existing floor levels. • Introduce joists at appropriate centres and fix to plates.	**Learners need to know how to:** • Interpret plans and written instructions. • Wear suitable and correct PPE. • Deploy appropriate warning notices and barriers and consider if work at height regulations are applicable and appropriate measures that may be required • Identify any Gas, Water or Electric appliance or circuit in the room and sub floor space and take the appropriate actions to isolate/protect/ avoid accordingly. • Provide temporary support to partitions, stairs, hearths etc. as will require supporting during floor removal. • Safely and correctly dispose of all timber waste. • Introduce new sub floor air vents **(See M19.07)** • Protect from damp and level wall plates. • Introduce joists at appropriate centres correctly supported. • Lay floorboards/chipboard correctly staggered and supported. • Use floor clamps, closing wedges and other clamp methods to tighten up floor boards prior to fixing.

	• Correctly lay and nail to joists floorboards clamped tight accordingly. • Correctly lay chipboard flooring material.	
M19.04	**Repair a timber stud partition.** • Interpret plans and written instructions; identify area(s) of work and partition schedule for repair. • Carry out all relevant preparation and precautions as required in accordance with ***Module 3.0****.* • Identify any services, pipes and cables that may be in the partition and take appropriate action as necessary to avoid disturbance or arrange for removal. • Identify whether partition is load bearing or not. • If load bearing provide temporary support appropriate for section to be removed. • Remove lath and plaster/plaster board from partition to expose timber section(s) for renewal. Dispose of waste correctly. • Cut out decayed/infested section(s) of timber stud wall and dispose of correctly. • Introduce new correct size replacement timber stud sections adequately secured to existing stud. • Isolate, using DPC material, any newly introduced timber sections from damp or potentially damp masonry.	**Learners need to know:** • How to interpret plans and written instructions. • Correct and suitable PPE to wear. • Where and when to deploy appropriate warning notices and barriers. • Why it is necessary to identify services and other hazards in a partition to be repaired and take appropriate action as required. • Why it is necessary to establish if a partition wall is load bearing. • Why temporary supports may be required. • Why correct disposal of waste material is necessary. • Methods used to fix and secure new timber stud sections. • Why it is necessary to protect timber from direct contact with masonry. • How to measure and cut plasterboard.

	• Fix plasterboard to the repaired area of wall and leave ready for plasterer to make good.	
M19.05	**Replace a decayed timber lintel with a reinforced concrete, steel or timber lintels.** • Interpret plans and written instructions; identify area(s) of work and lintel schedule for replacement. • Carry out all relevant preparation and precautions as required in accordance with ***Module 3.0*** above. • Identify other trades and activities in the building that may be affected by or have an impact upon the intended work and take appropriate action. • Erect safe working platform to provide safe working access to lintel schedule for renewal. • Measure and have available replacement reinforced concrete lintel. • If necessary reduce in length an oversized reinforced concrete lintel or other type of lintel to appropriate size or adjust aperture. • Introduce adequate temporary support/bracing as required to remove load from lintel. • Carefully extract decayed lintel and dispose of correctly. • Ensure bearing surfaces are suitable and adequate. • Assess lifting requirements and ensure adequate people or mechanical aids are available to safely introduce reinforced concrete	**Learners need to know how to:** • Interpret plans and written instructions. • Wear suitable and correct PPE. • Deploy appropriate warning notices and barriers. • Assess other activities in the building that may impact upon the intended work. • Provide temporary support and brace opening as required prior to removal of existing lintel. • Measure up for replacement lintel. • Know the correct procedure to reduce in length a reinforced concrete lintel. • Assess bearing surfaces. • Take into account manual handling and fix into position new concrete lintel. • Know appropriate methods of packing and bedding in a new lintel.

	lintel or other lintel type into position. Bed in and pack as required. • Remove temporary supports and bracing.	
M19.06	**Replace a decayed timber floor trimmer spanning a bay at first floor level or above.** • Interpret plans and written instructions; identify area(s) of work and trimmer schedule for replacement. • Carry out all relevant preparation and precautions as required in accordance with ***Module 3.0***. • Identify other trades and activities in the building that may be affected by or have an impact upon the intended work and take appropriate action. • Measure and have available correct size replacement RSJ or timber trimmers of adequate dimension. Taking into account manual handling requirements position replacement trimmer on floor in room of work. • From below erect adequate temporary shoring beneath 'room side' trimmed joists to be retained • Erect safe working platform beneath trimmer. • Remove ceiling beneath trimmer and forward into the bay. Dispose of debris correctly. • Raise floorboards within bay and back into the room to fully expose trimmer within the floor.	**Learners will know how to:** • Interpret plans and written instructions • Wear suitable and correct PPE • Deploy appropriate warning notices and barriers. • Warn others on site of intended work. • Measure for a replacement RSJ or timber trimmer sections. • Install adequate temporary shoring beneath a floor and through to oversite beneath if necessary. • Install a safe working platform. • Expose decayed trimmer from above and below. • Dismantle a bay floor supported by a trimmer. • Consider manual handling requirements prior to cutting out original trimmer. Cut out original timber trimmer and safely remove from site and • Remove minimal brickwork to provide working access. • Prepare suitable pad stones to support replacement trimmer. • Introduce replacement trimmer into position utilising recesses in brickwork either side of the bay immediately above the floor.

	• Remove all floor joists within the bay supported by the decayed trimmer. • Support trimmer beneath as necessary and cut out decayed trimmer in manageable sections. • Remove brickwork as necessary immediately above the floor either side of bay to provide working access for new trimmer introduction. • As required prepare adequate pad stones either side of bay in readiness to receive new trimmer. • Making use of the removed brickwork either side of the bay introduce replacement trimmer into position. • If an RSJ is used fit timber into the web recesses both sides of the RSJ for use in attaching strap hangers. • Level and stabilise trimmer and make good previously disturbed brickwork either side of bay. • If a timber replacement trimmer has been used isolate bearing ends from direct contact with supporting masonry using DPC material. • If an RSJ trimmer has been used secure joist strap hangers to timbers in both web recesses of the RSJ to support room side trimmed joist ends and in readiness to support bay side joists. • If a timber trimmer in more than one section has been used ensure the sections are adequately bolted together. Secure joist strap hangers to timber trimmer to support the room side trimmed joist ends and in readiness to support bay side joists.	• Secure joist strap hangers to replacement trimmer to support the existing floor joists and a new bay floor on the front side of the trimmer. • Reinstate disturbed floor boards. • Prepare ceiling to receive plasterboard taking into account fire regulation requirements.

	• Reconstruct bay floor attaching joist ends to strap hangers secured to the trimmer. • Remove temporary shoring beneath. • Reinstate/renew disturbed floorboards tightened together before fixing. • Prepare ceiling beneath ready to receive plasterboard	

M19.07	**Install a new sub floor air vent.** • Interpret plans and written instructions; identify wall(s) into which new air vents are required to be introduced. • Carry out all relevant preparation and precautions as required in accordance with ***Module 3****.* • Identify new vent position so that it will perform satisfactorily and no water ingress will occur. • Obtain correct vent type and size as stipulated in the specification. • Mark outline of vent on wall. • Drill a series of holes through wall around, but within, marked outline of new vent position. • Use hammer and cold chisel/bolster or electric hammer, break out masonry within outline and prepare outer masonry to receive new air vent. • Fix new air vent into the outer face of recess formed and make good using a sand and cement mortar.	**Learners need to know how to:** • Wear suitable and correct PPE. • Interpret plans and written instructions to identify new air vent positions. • Select different types and sizes of vents available. • Position an air vent correctly. • Use hammer and cold chisel/bolster/electric hammer to break out masonry and form an opening of specific dimension and shape through a wall. • Mix suitable mortar and permanently fix new vent into the outer face of recess and make good
M19.08	**Infill small voids in a wall**. • If necessary erect a safe working platform. • Assemble correct quantities of bricks/stone, sand, cement and slate that will be required. • Prepare in readiness bed surface for new bricks/stone in wall. • Prepare correct sand and cement mortar.	**Learners need to know how to:** • Wear suitable and correct PPE. • Assess materials required and quantities. • Prepare surfaces to receive bricks/stone. • Mix mortar using appropriate sand and cement ratios. • Cut, trim and break a brick/stone to size. • Pack bricks/stone using slate or other suitable material.

	• As required cut/break a brick/stone to required size. • Mix mortar at correct ratios and use to bed bricks/stone in void/opening. • If required pack bricks/stone using slate as required	
M19.09	**Disposal of waste.** • Adopt safe manual handling techniques, by practical application of lifting, pushing and carrying of waste loads. • As required secure waste materials in a safe location on site whilst waiting permanent disposal. • Segregate as necessary different waste types including hazardous/special waste. • Dispose of waste correctly and know when to use designated waste disposal sites	**Learners need to know how to:** • Correct handling techniques including task assessment, what mechanical aids are available to assist with waste movement. • Store waste material on site in a safe manner least likely to cause a hazard, injury or obstruction to others. • Identify and categorise different waste types. • Recognise hazardous/special waste and dispose of it correctly. • What constitutes hazardous/special waste and special requirements for its disposal.

M20 - Module 20.0
Rising Damp and its Control

An Apprentice should possess a knowledge and understanding of how rising damp occurs, factors that influence it and its consequences. There are numerous methods available to control Rising Damp and an Apprentice should have an understanding of the various methods included in *BS 6576 2005 Code of practice for the diagnosis of rising damp in walls of buildings and installation of chemical damp proof courses*. An Apprentice should also be familiar with the consequences associated with Rising Damp.

Ref	Practical	Knowledge
M20.01	**Rising Damp – Diagnosis and cause:** • Accompany a CSRT qualified surveyor with a minimum of five years' experience conducting damp/rising damp surveys/inspections for a minimum of 2 days **(M2.04).** • During this time walls and other surfaces affected by rising damp will be pointed out. • The reason for and the process of rising damp will be explained and discussed. • Procedures to go through when assessing a wall for potential rising damp. • Characteristic appearance and diagnostic techniques will be explained. • How to use a hand held surface moisture meter as an aid in the diagnosis of rising damp. • The consequences of rising damp; in particular salt contamination of wall plaster and potential adjacent • wood rotting fungi will be highlighted.	**Learners will know :** • How Rising Damp occurs. • The purpose of a Damp Proof Course. • The relationship between ground levels and DPC level • What influences the height up to which Rising Damp will occur. • About capillary bound moisture and surface liquid moisture. • Rising Damp in parts of a building other than walls. • How to assess a building where rising damp is suspected. • What a typical rising damp affected wall often looks like. • Understand the use of hand held moisture meter as an aid in the diagnosis rising damp. • What hygroscopic salt contamination of wall plaster is – how and why it occurs in walls affected by rising damp. • Timber decay - why it is likely in timbers adjacent to or in contact with a wall affected by rising damp.

	• Different types of original physical damp proof courses, where and how to locate them will be demonstrated. • Other diagnostic methods available will be discussed.	• Different types of original physical damp proof courses – where and how to locate them – where a damp proof course should be. • What other types of diagnostic procedures are available.
M20.02	• **Control Rising Damp using a high pressure solvent based injection chemical DPC.** • Carry out preparation and take all relevant precautions as set out in ***Modules 3.0, 4.0, 7.0, 9.0, and 10.0.*** • Be familiar with the content of the PCA Code of Practice for The Installation of Remedial Damp Proof Courses in Masonry Walls. • Interpret plans and written instructions and identify walls schedule for treatment. • Wear suitable and correct PPE. • Deploy appropriate warning notices and barriers. • Deploy suitable fire extinguisher in a suitable readily accessible position. • Turn off/isolate/protect any electrical appliance or electrical circuit in the area(s) of treatment. • Identify the correct position that the new DPC will be introduced into the wall. • If relevant open up base of cavity wall and inspect for accumulation of mortar droppings/debris. • If mortar droppings/debris is present in the base of a cavity wall safely open up base of cavity wall at intervals, remove mortar dropping/debris and make good.	**Learners need to know:** • Suitable and correct PPE to wear • Pre-installation measures and precautions necessary prior to starting work. • Specific hazards posed by conducting a high pressure injection of a flammable material into a wall and appropriate precautions to take. • High Pressure injection technique and method as stipulated by the product manufacturer and the PCA Code of Practice. • The fire risk posed by the use of white spirit and white spirit vapours. • Where to appropriately deploy a fire extinguisher. • How to turn off/isolate any electrical appliance or circuit in the area of treatment. • How to remove bricks and inspect inside a cavity wall. • How to reinstate removed bricks. • The correct position to introduce a remedial damp proof course. • The correct drilling procedure. • How to conduct a stepped drilling and injection procedure. • How to use a Spill Control Kit.

	• Decide whether drilling will take place from inside, outside or both. • Ensure clear working access is available. • Carry out wall drilling programme as stipulated by remedial damp proof course product manufacturer relative to the wall type and thickness being treated. • Set up injection pump with DPC injector(s) attached ready for use **(see M9.0)**. • Identify specific hazards posed by conducting a high pressure injection procedure of a flammable material and take appropriate precautions. • Carry out high pressure injection of chemical DPC material into pre-drilled holes in accordance with DPC product manufacturer's instructions. • If required and necessary carry out a stepped drilling DPC introduction procedure. • Make good external drill holes either using a sand and cement mortar or plastic plugs.	• How to dispose of contaminated waste material (Spill Control Kit). • How to make good external drill holes.
M20.03	**Control Rising Damp using a low pressure water based injection chemical DPC.** • Carry out preparation and take all relevant precautions as set out in ***Modules 3.0, 4.0, 7.0, 9.0, and 10.0.*** • Be familiar with the content of the PCA Code of Practice for The Installation of Remedial Damp Proof Courses in Masonry Walls.	**Learners need to know:** • Pre-installation measures and precautions necessary prior to starting work. • Specific hazards posed by conducting a low pressure injection of a highly alkaline material into a wall and appropriate precautions to take. • Low Pressure injection technique and method as stipulated by the DPC product manufacturer and the PCA Code of Practice.

	• Interpret plans and written instructions and identify walls schedule for treatment. • Select and wear suitable and correct PPE. • Deploy appropriate warning notices and barriers. • Turn off/isolate/protect any electrical appliance or electrical circuit in the area(s) of treatment. • Identify the correct position that the new DPC will be introduced into the wall. • If relevant open up base of cavity wall and inspect for accumulation of mortar droppings/debris. • If mortar droppings/debris is present in the base of a cavity wall safely open up base of cavity wall at intervals, remove mortar dropping/debris and make good. • Decide whether drilling will take place from inside, outside or both. • Ensure clear working access is available. • Carry out wall drilling programme as stipulated by remedial damp proof course product manufacturer relative to the wall type and thickness being treated. • Set up injection pump with DPC injector(s) attached ready for use **(see M 9.0)**. • Carry out low pressure injection of chemical DPC material into pre-drilled holes in accordance with the DPC product manufacturer's instructions.	• How to turn off/isolate any electrical appliance or circuit in the area of treatment. • How to remove bricks and inspect inside a cavity wall. • How to reinstate removed bricks. • The correct position to introduce a remedial damp proof course. • The correct drilling procedure. • How to dilute a concentrate DPC fluid into a ready to use material. • The correct label to attach to the ready to use product following dilution. • How to use a Spill Control Kit. • How to dispose of contaminated waste material (Spill Control Kit). • Manually handle dilute product. • How to conduct a stepped drilling and injection procedure. • How to make good external drill holes.

	• If required and necessary carry out a stepped drilling DPC introduction procedure. • Make good external drill holes either using a sand and cement mortar of plastic plugs.	
M20.04	**Control Rising Damp using hand insertion injection mortar chemical DPC** • Interpret plans and written instructions. • Wear suitable and correct PPE. • Deploy appropriate warning notices and barriers as required. • Turn off/isolate/protect any electrical appliance or electrical circuit in the area(s) of treatment. • Identify the correct position for the new DPC. • Carry out correct drilling procedure in accordance with DPC product manufacturer's instructions. • Flush out predrilled holes with water. • Prepare injector mortar gun and change leather seal as necessary. • Prepare workable quantity of injection mortar. • Load injection mortar gun and introduce injection mortar into predrilled holes. • Make good external drill holes. • Clean up floor surfaces on which injection mortar has been spilt.	**Learners need to know:** • Pre-installation measures and precautions necessary prior to starting work. • Correct and suitable PPE to wear. • Specific hazards posed by using injection mortar. • How to turn off/isolate any electrical appliance or circuit in the area of treatment. • The correct position to introduce a remedial damp proof course. • The correct drilling procedure for the introduction of injection mortar. • How to prepare injection mortar in sufficient workable quantities to minimise waste. • How to change a leather seal in an injection mortar gun. • How to load an injection mortar gun with injection mortar. • How to backfill pre-drilled holes with injection mortar. • How to make good external drill holes. • How to clean up surfaces on which injection mortar has been spilt.

M20.05	**Control of Rising Damp using hand insertion cream type Damp Proof Course product.** • Interpret plans and written instructions. • Wear suitable and correct PPE. • Deploy appropriate warning notices and barriers as required. • Turn off/isolate/protect any electrical appliance or electrical circuit in the area(s) of treatment. • Identify the correct position for the new DPC. • Assess thickness of wall to be treated and carry out correct drilling procedure to a size and depth in accordance with cream type DPC product manufacturer's instructions. • Subject to product type being used prepare injector gun, skeleton gun, pneumatic pump (with delivery hose and injector attached) ready to receive cream type DPC product. • Subject to product type being used introduce cream type DPC product cartridge into application gun or skeleton gun, open cartridge in accordance with instructions and attach injector nozzle. • Subject to product type being used decant cream type DPC product from tub into pneumatic pump and pressurise pump in accordance with manufacturer's instructions. • Using prepared and loaded application method, backfill each pre-drilled hole with cream type DPC product in accordance with manufacturer's instructions.	**Learners need to know:** • Pre-installation measures and precautions necessary prior to starting work. • Correct and suitable PPE to wear. • Specific hazards posed by using cream type Damp Proof Course (DPC) product. • How to turn off/isolate any electrical appliance or circuit in the area of treatment. • The correct position to introduce a remedial damp proof course. • The correct drilling procedure for the introduction of cream type DPC product. • How to prepare application equipment in readiness to receive product. • How to backfill pre-drilled holes with cream type DPC product. • How to make good external drill holes.

M20.06	**Preparation for re-plastering associated with rising damp treatment.** • Select and wear correct and suitable PPE. • Accompany a CSRT qualified surveyor with a minimum of five years' experience conducting damp/rising damp surveys/inspections for a minimum of 2 days **(M2.04)** and understand why re-plastering is necessary in conjunction with rising damp treatment. • Carry out preparation and take all relevant precautions as set out in ***Modules 3.0, 4.0, 7.0, 9.0, and 10.0.*** • Be familiar with the content of the PCA Code of Practice for The Installation of Remedial Damp Proof Courses in Masonry Walls. • Remove skirting boards and architraves from walls schedule for re-plastering work. • Isolate any electrical circuit fixed to wall schedule for re-plastering. • Hack off plaster from wall(s) affected by rising damp using a hammer and bolster and/or electric hammer to heights as specified on sketch plan and/or written instructions. • Brick up/make good any damaged exposed wall surfaces/corners in readiness for re-plastering. • Make up a suitable material to use as a floor/wall junction where a solid floor is present.	**Learners need to know:** • The reason why re-plastering is necessary. • How to interpret plans and written instructions. • Correct and suitable PPE to wear. • Appropriate warning notices and barriers to deploy. • The heights up to which re-plastering is necessary and what influences this. • How to remove skirting boards and architraves. • How to isolate electrical circuit on walls schedule for replastering. • Methods and safe use of equipment used to hack off existing plaster. • Precautions to take before and when working on a party wall. • How to bag up and dispose of hacked off plaster taking into account manual handling requirements.

	• Apply floor/wall junction material at base of wall and on to adjacent section of solid floor	

M21 - Module 21 **The internal fixing of cavity drainage membrane above external ground level as a dry lining system**		
M21.01	**Application of cavity drainage membrane as dry lining system to provide a dry decorative surface.** • Select and wear correct and suitable PPE. • Be aware of circumstances and situations when a remedial DPC is not a viable option and the reasons why. • Prepare wall surfaces to be covered with cavity drainage membrane as stipulated in the specification. This may involve hacking off plaster, removing wall paper, skirting boards, architraves. • Isolate any electrical circuit fixed to wall schedule for fixing cavity drainage membrane. • Fix Cavity Drainage Plaster Membrane to a wall in accordance with manufacturer's instructions in readiness to receiving plaster direct or dot and dab fixed plasterboard. • Fix Cavity Drainage Membrane to a wall in accordance with manufacturer's instructions and timber battens to membrane fixings ready to receive plasterboard • Fix Cavity Drainage Membrane to a wall in accordance with manufacturer's instructions and fix metal studding to membrane fixings, from floor and ceiling ready to receive plasterboard.	**Learners need to know:** • Correct PPE to wear. • Circumstances, situations and construction types when an injected remedial DPC is not a viable option. • How to isolate electrical circuit on walls schedule for fixing cavity drainage membrane. • How to fix Cavity Drainage Plaster Membrane to a wall surface in accordance with manufacturer's instructions in readiness to receive plaster direct. • How to fix Cavity Drainage Plaster Membrane to a wall surface in accordance with manufacturer's instructions in readiness to receive plasterboard to be fixed using a dot and dab technique. • How to fix Cavity Drainage Membrane to a wall and utilising the membrane fixings secure timber battens at appropriate centres ready to receive plasterboard. • How to fix Cavity Drainage Membrane to a wall and utilising the membrane fixings secure metal studding at appropriate centres ready to receive plasterboard.

M22 - Module 22.0
Exterior wall surface preparation and the application of a Surface Water Repellent

This module provides an Apprentice with the knowledge and understanding necessary to prepare an exterior wall surface adequately in readiness to receive a surface water repellent. An Apprentice should be capable of making good small areas of defective pointing/mortar/cracks on an external wall surface in readiness to receive a surface water repellent

Ref	Practical	Knowledge
M22.01	**Preparation of a wall surface to receive a surface water repellent.** • Select and wear correct and suitable PPE. • Interpret plans and written instructions and identify wall(s) schedule for treatment. • Accompany a CSRT qualified surveyor with a minimum of five years' experience conducting damp/rising damp surveys/inspections for a minimum of 2 days and understand circumstances when a surface water repellent may be required **(see M2.04).** • Consider the wall schedule for treatment and carry out a risk assessment with particular regard to the Working at Height Regulations 2005 and use of correct access equipment. All mobile scaffold towers to be erected by PASMA certified person only. • Recognise a wall surface that is suitable to receive a surface water repellent. • Recognise a wall surface that is not suitable to receive a surface water repellent and needs	**Learners need to know:** • How to interpret plans and written instructions. • How to carry out a risk assessment with particular regard to working at height. • Correct and suitable PPE to wear. • Appropriate warning notices and barriers to deploy. • How to erect safe working platforms and when to request expert help. • All mobile scaffold towers only to be erected by PASMA certified person • The reason why wall preparation is necessary. • What is likely to happen if a water repellent is applied on to a poorly prepared wall surface. • The extent of raking out and making good necessary. • Composition of mortar to make good.

	preparatory work prior to application. • Remove and replace damaged brickwork/stonework. • Rake out and make good defective pointing and cracks. • Remove and prepare any delaminating surface that will receive treatment.	
M22.02	**Application of a surface water repellent. (Liquid or cream type)** • Select and wear correct and suitable PPE. • Interpret plans and written instructions and identify wall(s) schedule for treatment. • Set up and deploy appropriate warning notices and barriers. • Consider the wall schedule for treatment and carry out a risk assessment with particular regard to the Working at Height Regulations 2005 and use of correct access equipment. All mobile scaffold towers to be erected by PASMA certified person only. • Erect safe working platforms and recognise situations when expert assistance is required. • Check wall surface is suitable to receive a surface water repellent. • If necessary prepare wall surface as required ready to receive water repellent. • Mask windows and doors to protect from surface repellent contamination.	**Learners need to know:** • Correct and suitable PPE to wear. • How to interpret plans and written instructions. • Appropriate warning notices and barriers to deploy. • How to carry out a risk assessment with particular regard to the Working at Height Regulations 2005 and use of access equipment. • How to erect and secure access equipment properly and identify when expert assistance is required. • All mobile scaffold towers should only to be erected by PASMA certified person • Assess the condition of a wall surface is suitable to receive a surface water repellent. • How to mask windows, doors and protect foliage and other surfaces from possible contamination. • Be aware of and take appropriate precautions to protect all property that may be affected by ‘drift’. (liquid type only) • Select and set up the appropriate application equipment.

	• Protect plants and foliage that may be affected by surface water repellent contamination. • Take appropriate precautions to protect any property that may be affected by 'drift' of surface water repellent during application (liquid type only). • Set up and prepare suitable application equipment. • Apply surface water repellent correctly in accordance with manufacturer's instructions causing minimal impact to any adjoining property and surfaces. • Remove masking, protective coverings and self-erected access and clear away.	• Apply surface water repellent correctly in accordance with manufacturer's instructions. • Dismantle access and application plant and clear away.

M23 - Module 23.0 **Assessment and Final Sign Off**		
The practicable and knowledge will be assessed through various disciplines including: Observation, Professional Discussion, Photographic and other methods, all subject to an agreed Assessment Plan with the learner		
Ref	**Practical**	**Knowledge**
M23.01	**Each learner is to provide performance evidence in Wood Preserving and Damp-proofing VQ Level 2 in:** • Health & Safety on site. • Handling & Storage on site. • Documentation & Communication on site. • Site preparation. • Material preparation. • Material application/installation. • Application equipment preparation • Reinstatement after treatment • Building repairs	**Job Knowledge:** • Qualification Credit Framework Assessment in following Units: ▪ QCF 641 ▪ QCF 642 ▪ QCF 643 ▪ QCF 444 ▪ QCF 445 ▪ QCF 446 • Professional discussion • Witness Testimony
	Final Sign Off The penultimate visit, usually visit 3 during months 14 – 15 – *(see 4) Assessment)* will include a check of the N/SVQ requirements and the drawing up of an action plan for the completion of the apprentice's individual N/SVQ Portfolio and final sign off of the N/SVQ.	

Section 9.0 Glossary of Terms

BWPDA	British Wood Preserving and Damp-proofing Association
CITB	Construction Industry Training Board
COPR	Control Of Pesticide Regulations
COSHH	Control Of Substances Harmful To Health
CSCS	Construction Skills Certification Scheme
CSRT	Certificated Surveyor in Remedial Treatment
DPC	Damp Proof Course
MEWPs	Mobile Elevated Work Platforms
MSDS	Material Safety Data Sheet
NOS	National Occupational Standards
N/SVQ	National Vocational Qualification
PASMA	Prefabricated Access Suppliers' & Manufacturers' Association
PAT	Portable Appliance Testing
PCA	Property Care Association
PPE	Personal Protective Equipment
QCF	Qualification Credit Framework
SNCO	Statutory Nature Conservation Organisation

Section 10.0 Key Parties

Training Provider:

Property Care Association
11 Ramsay Court
Kingfisher Way
Hinchingbrooke Business Park
Huntingdon
Cambs
PE29 6FY

T: 0844 375 4301
E: pca@property-care.org
W: www.property-care.org