



BRITISH DAMAGE MANAGEMENT ASSOCIATION

EXAMINATION SYLLABUS: March 2022

TECHNICIAN (Level 1) and SENIOR TECHNICIAN (Level 2)

INTRODUCTION

The Damage Management Technician meets fresh challenges daily. Each incident brings its unique combination of technical problems and customer requirements. To be able to make valid decisions in these different circumstances the technician must be widely knowledgeable.

The technician must understand how buildings are constructed and how the utilities are organised within them, and at the same time he or she must have a working knowledge of the items that are likely to be found within the building. Additionally, the technician has, to understand basic science so that he or she can correctly install drying equipment, and basic microbiology so that he or she can take the correct action to decontaminate sewage spills or mould growth. The skilled technician will also need some understanding of electrical equipment, textiles, carpets, furniture, collectibles, books, graphic art and more.

Yes, the list above is large, and this reflects the special nature of our work. As you work through this document you may be surprised at the amount of information you will need. We encourage you to study each section, some of which are very short, as you will be required to learn the information identified.

The good news is that in many subjects you will only need sufficient information to enable you to recognise your own competence levels and know when to call in an appropriate specialist. In other subjects you will be that specialist.

This syllabus is not intended to list everything the technician needs to know, but we have included what we judge to be the most important knowledge areas.

The skilled restoration technician is inquisitive, on a continual search for knowledge, as he or she progresses in this challenging sector. We hope that studying in line with this syllabus will provide the core knowledge that will increase technicians' abilities, improve their job satisfaction, and enable them to gain accreditation, recognition, and respect as damage management professionals.

The BDMA welcomes comment, which will be considered for inclusion in future editions and updates.

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TECHNICIAN (Level 1)

PLEASE NOTE: In addition to courses identified, **all** practitioners aiming to gain accreditation at Technician level are advised to attend the official **BDMA CORE DAMAGE MANAGEMENT – TECHNICIAN** Training Course, only available via **BDMA TRAINING**

*In addition to the suggested study programme a **Supplementary Information Document**, with further resources you may want to access, is provided at the end of this document*

To reach the required standards which will enable you to sit the BDMA Technician Examination you must study the *BDMA Official Damage Management Training & Reference eLearning Module*, together with the additional information identified in this syllabus. It is also recommended that you attend as many courses as possible covering the subjects outlined in this document. You will find a number, of good quality in-house and independent training courses, including those provided by BDMA Training and the BDMA e-Academy that will add to your knowledge.

Once you have succeeded in passing the Level 1 Exam you will be accredited as a BDMA Technician and considered to be sufficiently competent to carry out the day to day tasks of a damage management practitioner outlined in this syllabus. However, to keep up to date with new developments and industry best practice, you should continue to study and attend courses to meet your Continuous Professional Development (CPD) targets and work towards achieving BDMA Senior Technician status in the future.

The key to becoming a BDMA Technician lies in familiarising yourself with the *BDMA Official Damage Management Training & Reference Module* and developing a grasp of all the subjects it covers. You will also need an understanding of the rudiments of building construction and how various materials and methods are affected by damage from water, fire, and contamination.

The syllabus outlines the minimum information, you will need in order, to sit the examination but it is not suggested your learning should be confined to what is covered here. The syllabus should be used as a guide to the minimum level of knowledge you will require to become competent in the core damage management disciplines and achieve professional accreditation.

The Syllabus consists of four sections:

CORE MODULE • GENERAL MODULE • FIRE MODULE • WATER MODULE

Additionally, you will need some knowledge of the following:

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|--------------------------------|----------------------------------|
| Buildings (wood flooring) | Contents (electrical appliances) |
| Contents (books and documents) | Contents (textiles): |
| Contents (wood furniture) | Contents (upholstery): |
| Contents (carpet cleaning) | Contents (carpet cleaning) |

Questions on these subjects will form part of the Technician Examination and candidates are

advised to study the syllabus in detail, including suggested information to revise for these subjects.

While the majority, of the Technician Examination questions are multiple choice, there are some questions requiring written answers in each section.

PLEASE NOTE: TO GAIN ACCREDITATION candidates must achieve a pass mark in **each** of the four sections.

Technician Level 1: Core Module

The information you need to study is:

BDMA Official Damage Management Training & Reference Module

International Complaints Procedure, FSA Handbook online – www.fsa.gov.uk (Full Handbook > Redress > Dispute Resolution: Complaints > Treating complaints fairly [DISP 1] 1.3 to 1.10), PAS 64

In-house company protocols on customer care

in-house practice and procedures for attending on site, W.E.E Regulations (Waste Electrical and Electronic Equipment), Waste disposal Regulations, Highways Act 1980 Sections 139/140 (Control/Removal of builders' skips) Guidance Notes on placement of skips on the public highways – may vary with the relevant local authority, The Control of Asbestos Regulations 2006

Principles of Health & Safety at work (*Allan St John Holt, IOSH*) ISBN 978 0 901357434, HSE website, in-house H&S procedures, and protocols

You are advised to consider courses covering:

ISO 1002 2004 procedures guidance, FSA awareness (as per FSA Handbook), Complaints handling

Customer care (in-house company courses), Dealing with challenging and traumatised customers

In-house induction and procedures for onsite visits, Health & Safety (H&S) and Damage Management Awareness courses (relevant courses available through the BDMA e-Academy) Generic Health & Safety Awareness, Health & Safety in the workplace, Generic Asbestos awareness – (in-house training and e-learning options, Chartered Institute of Environmental Health – www.cieh.org, BDMA e-Academy)

CII courses on Risk Management, Underwriting and Property (www.cii.co.uk General Insurance Training & Learning Course listings plus E-learning Support Services), in-house e-learning options, insurance awareness, the roles of Claims advisors and Loss Adjusters/Assessors)

Complaints Procedure:

The outcomes of the learning experience should be an understanding of:

How to deal with a complaint, what methods are available to handle complaints, the value of negative and positive feedback and the importance of resolving complaints quickly, the implications of dealing with complaints on behalf insurers, procedures required under the FSA Regulations

Customer Care:

The outcomes of the learning experience should be an understanding of:

How incidents affect peoples' behaviour differently, what your customer is experiencing, how to operate sensitive procedures in domestic and business properties, how to deal with challenging customers, what constitutes trauma and how it affects individuals differently

Ethics and Business Practice:

The outcomes of the learning experience should be an understanding of:

Ethics relating specifically to the damage management industry, the potential conflict of interest around BER (Beyond Economic Restoration), the correct procedures for disposal of items within the current laws and regulations

Health and Safety:

The outcomes of the learning experience should be an understanding of:

The law relating to HASWA (Health & Safety at Work Act), how to carry out a risk assessment and why, the principles of COSHH and PPE, how to use MSD sheets, the safe use of equipment at work and manual handling techniques, Portable Appliance Tests, asbestos in buildings and its correct removal and disposal, safe working practices when working at height, noise control, in- house protocols on lone workers and fire precautions, protecting the public and others, health effects of mould in a building, the bacterial consequences of black water and sewage

Insurance Policies and Conditions:

The outcomes of the learning experience should be an understanding of:

What is and isn't covered in a household insurance policy, the insurer and insured contractual agreement terms, the individual job roles in the insurance claims industry, the meaning of the terminology in insurance policies, the rudiments of business interruption cover, your limits as to the type of advice you can give

Technician (Level 1): General Module

The information to study is:

BDMA Official Damage Management Training & Reference Module, Principles of Health & Safety at work (Allan St John Holt, IOSH) ISBN 978 0 901357434, Electricity at Work Regulations (EAW), Provision and Use of Work Equipment Regulations (PUWER) – HSE Website, in-house H&S procedures and protocols

Suppliers' equipment and product information sheets, British Institute of Cleaning Science (BICS) website (<https://www.bics.org.uk/>)

Suppliers' product information sheets, C.O.S.H.H (Control of Substances Hazardous to Health) and P.P.E (Personal Protective Equipment) via HSE website

The courses you are advised to attend are:

BDMA e-Academy Construction Techniques module, The BDMA course: Buildings and Construction through the Ages, in-house construction training, generic H&S Awareness courses

BICS training courses, generic training courses on cleaning/restoration techniques.

Manual Handling H&S course

In-house training and e-learning courses, product supplier courses, generic courses covering cleaning/restoration techniques, courses covering C.O.S.H.H (Control of Substances Hazardous to Health) and P.P.E (Personal Protective Equipment), Chartered Institute of Environmental Health (www.cieh.org) foundation courses on Health & Safety Chartered Institute of Environmental Health (www.cieh.org)

Buildings – Electrical Wiring:

The outcomes of the learning experience should be an understanding of:

The basics of domestic electrical wiring circuits, what information is required for a temporary supply including extension cables, Health and Safety when dealing with electricity

Buildings – Heating & Ventilation, Air Conditioning & Plumbing Systems:

The outcomes of the learning experience should be an understanding of:

The basics of domestic plumbing and sewage systems, the basic components of heating, ventilation, and air-conditioning systems (HVAC)

Buildings – Various Structural Systems:

The outcomes of the learning experience should be an understanding of:

The huge variety of building systems in the UK and how to recognise a timber frame building, the potential problems of vertical leaks and use of plasterboard, how to recognise an insulated floating floor, the variations in drying techniques dependent on the structure of the property and the effects of differential drying.

Permeance:

The outcomes of the learning experience should be an understanding of:

What Permeance is and its effect on the drying of buildings

Historic and Listed Buildings:

The outcomes of the learning experience should be an understanding of:

Your competency levels when working in these types of buildings, when and why to involve specialists

Damage Limitation – Basic Principles:

The outcomes of the learning experience should be an understanding of:

What a triage assessment is and how to carry one out, what action is required to minimise secondary damage and how this affects your decision, how to reduce consequential losses

Cleaning and Restoration:

The outcomes of the learning experience should be an understanding of:

The different types of cleaning techniques for different surfaces and materials and how to carry them out effectively

Transportation, Moving and Packing:

The outcomes of the learning experience should be an understanding of:

The correct procedures for the removal of items from premises, the correct lifting and carrying methods, how to effectively pack and store items, in-house procedures

Technical – Chemicals:

The outcomes of the learning experience should be an understanding of:

What pH is and how it affects the choice of cleaning products, what the Health & Safety requirements are when using chemicals, the importance of using the correct chemicals to the correct dilution rates

Odour Control:

The outcomes of the learning experience should be an understanding of:

The fact that odours are a subjective experience, the difference between masking and removal of odours and when and why removal is preferred, how to recognise odour sources and what a musty odour indicates, why smoke odour elimination is not a precise science as it cannot be measured, which odour removal techniques to use and why, and how to carry out the appropriate odour removal techniques satisfactorily

Technician Level 1: Fire

The information to study is:

BDMA Official Damage Management Training & Reference Module, Principles of Health & Safety at work (Allan St John Holt, IOSH)
Suppliers' product, and equipment information sheets

The courses you are advised to attend are:

In-house training and e-learning courses, Chartered Institute of Environmental Health (www.cieh.org) foundation courses on Health & Safety
Asbestos awareness courses (Smoke/Fire restoration)
Suppliers' product and equipment courses, generic courses on cleaning/restoration techniques

Fire – Damage Limitation:

The outcomes of the learning experience should be an understanding of:

How to carry out a basic fire damage triage, the principles of damage limitation by identifying potential secondary damage to items and the methods to prevent it, the corrosive and conductive effects of **some** fire residues, how smoke can stain items and damage electronics, different types of fires and why test cleaning is important, a heat gradient

Risk Assessments after Fires:

The outcomes of the learning experience should be an understanding of:

How to carry out a risk assessment, the toxicity of fire residues, how to reduce airborne contaminants, how to use ventilation, air filtration and air scrubbing methods, how to decontaminate loose dry soot

Contents – Furniture:

The outcomes of the learning experience should be an understanding of:

How smoke residues affect wood and the appropriate restoration techniques, how acidic smoke residues can stain plastic laminates, how to triage a fire damaged item

Contents – Miscellaneous Household Items:

The outcomes of the learning experience should be an understanding of:

How to carry out a triage on smoke affected contents and the decisions to make as a result, the effects of smoke residue and possible restoration techniques for electrical and electronic items, textiles, ceramics, artwork, photographs, kitchenware, documents and books, and recorded media, how items can also be affected by water damage, the potential value of collectables, the problems with smoke contamination of LPs, CDs, DVDs and audio/video cassettes, the potential effects of cleaning on items already suffering from wear and tear, the options for freeze/vacuum drying techniques for documents, books and photographs, and when to involve specialists

Surveying – Chloride Testing:

The outcomes of the learning experience should be an understanding of:

Where chlorides come from, the benefits of chloride testing and its limitations, what is affected by chlorides and how or what actions to take if chlorides are detected

Technical – Fires, Smoke and Soot:

The outcomes of the learning experience should be an understanding of:

Fire types to predict the type of contamination, the significance of oxygen starved and oxygen rich fires, how to recognise a protein fire and its affects, the behaviour of smoke and the points in a building it will contaminate, how high and low pressure affects the behaviour of smoke.

Technician Level 1: Water

The information to study is:

BDMA Official Damage Management Training & Reference Module, Principles of Health & Safety at work (Allan St John Holt, IOSH)

Suppliers' product and equipment information sheets

The courses you are advised to attend are:

In-house training courses, generic water/flood damage restoration courses, Chartered Institute of Environmental Health (www.cieh.org) foundation courses on Health & Safety, product and equipment supplier courses

Water Damage Limitation:

The outcomes of the learning experience should be an understanding of:

How to apply a triage to water damage and the classifications of the water source, why it is important to identify a vertical flood and the age of the incident, the effects on materials of the different types of water ingress, how to carry out water damage limitation and decontamination methods, how to carry out a water damage risk assessment and the Health & Safety issues around foul water, how water vapour moves through the air and ways in which this can be controlled, when stripping out is, or is not, appropriate, the levels of competency required.

Drying Equipment and Usage:

The outcomes of the learning experience should be an understanding of:

The different types of equipment available in the damage management industry and how to use them

Moisture Measuring:

The outcomes of the learning experience should be an understanding of:

How to take moisture measurements in most water damaged materials, what type of readings come from a resistance meter, radio wave meter and a digital thermo-hygrometer and what they mean, what other moisture measuring methods are available, how moisture in concrete and dense material is measured, how and why you must calibrate moisture meters, the importance of Relative Humidity (RH%)

Drying Buildings and Contents:

The outcomes of the learning experience should be an understanding of:

What dry means in normal occupation of a building, why it is important to remove 'liquid' water from a building, what energy is required to create evaporation in a building, the importance of creating a 'balanced drying system', how to install and use desiccant and refrigerant dehumidifiers and high capacity heating systems, what a humidistat can do, the effects of water and humidity on wood, the restoration possibilities for water damaged furniture, documents and photographs, and when to involve specialists

Microbiological Surveying after Black Water Contamination:

The outcomes of the learning experience should be an understanding of:

What bacterial swabbing is and how to carry it out, what type of laboratory analysis is available

Technical – Microbiology and Water Damage:

The outcomes of the learning experience should be an understanding of:

How changes in the equilibrium moisture content in buildings affect mould growth

Technical – Psychrometry:

The outcomes of the learning experience should be an understanding of:

The effects of temperature on Relative Humidity (RH%) and how hygroscopic material is in turn affected by RH%, what Equilibrium Relative Humidity (ERH) is and the significance of an ERH above 80%, what Specific Humidity is, what effects air movement has on evaporation

Technical – Moisture Mechanics:

The outcomes of the learning experience should be an understanding of:

How water vapour transmits through air, how to calculate vapour pressure differential

Technician Level 1: Additional Topics to Study

Whilst not requiring the same depth of knowledge as the core damage management disciplines, there may be questions on any of the following subjects in the Technician Level 1 examination

Buildings – Wood Floors

Suggested areas to study:

The different types of wooden flooring and laminates, the damage caused by fire residues and water to wooden and laminate flooring, triage assessments of flooring.

Contents – Electrical/Electronic Appliances & Recorded Media (LPs, CDs, Cassettes):

Suggested areas to study:

The conductive and corrosive nature of some fire residue and how smoke enters low pressure interiors of appliances, how to deal with the damage limitation procedures and restoration processes for damaged equipment, how to remove fire staining from exteriors of equipment, the problems of contamination of LPs, CDs and cassettes from fire residues, understanding the triage assessments of equipment and the cost versus replacement issues

Contents – Books, Documents, Photographs, & Graphic Art

Suggested areas to study:

The effects of fire residue and water damage and the restoration possibilities, the correct handling and packing methods for contaminated books, freeze/vacuum drying techniques, the process and application of triage to make decisions, all the issues relating to restoration of photographs and graphic art, the insurers liability for photographs, the importance of urgent action regarding colour migration

Contents – Textiles

Suggested areas to study:

Fibre types and values, the potential problems with different fibre types, dye stability and fragility of rugs and textiles when damaged by fire residues or water, spot removal techniques, the wide range of restoration techniques available and the suitability of each for specific textiles, the potential results/effects of restoration on types of textile, the knowledge and application of triage to make decisions

Contents – Wood Furniture

Suggested areas to study:

Veneers, laminates and printed finishes, 'finishes' to wood surfaces and the vulnerability of wood with no finish or worn finish, the effects of fire residue or water damage to wood, restoration and refinishing techniques for wood, the knowledge and application of triage to make decisions

Contents – Carpet Cleaning

Suggested areas to study:

The different manufacturing methods, fibre types, and fixing/fitting methods, the effects of fire residue and water damage on carpets, understanding pH and its effects on dyes, fibres and restoration systems, the different types of cleaning systems and when and how to apply them, spotting and pre-treatment methods, the importance of pre-inspections and the limitations of restoration methods, the knowledge and application of triage to make decisions

Contents – Upholstery

Suggested areas to study:

The different fabric types, fibre types and finishes to upholstery, the manufacturing process of upholstery and how this can affect the restoration technique, the effects of fire residue and water damage on upholstery, pH and its effects on dyes, fibres and restoration systems, the different types of cleaning systems and when and how to apply them, spotting and pre-treatment methods, the importance of pre-inspections and the limitations of restoration methods, the knowledge and application of triage to make decisions

SENIOR TECHNICIAN (Level 2)

PLEASE NOTE: In addition to courses identified, **all** technicians aiming to gain accreditation at Senior Technician level are advised to attend the official **BDMA CORE DAMAGE MANAGEMENT – SENIOR TECHNICIAN** Training Course, which is only available via **BDMA TRAINING**

*In addition to the suggested study programme a **Supplementary Information Document**, with further resources you may want to access, is provided at the end of this document*

The Senior Technician Exam follows the same format as the Technician Exam, but the questions you will need to answer will test the depth and breadth of your knowledge to a much higher degree. Therefore, you should have had substantial experience in the damage management industry, at a supervisory or management level, before taking this exam

It is advisable that you take guidance from your on-line manager and training department on when is the best time for you to take this next step forward

To be prepared for the Senior Technician exam you must fully review all the study material from your Technician study course, plus be prepared to study supplementary information and attend advanced courses in damage management

The information to study is:

BDMA Official Damage Management Training & Reference Module, 2nd Edition RIA Guidelines for Fire & Smoke Damage Repair (www.ascr.org/Publications/Books) [formerly NIDR guidelines for fire and smoke repair], IICRC S500 and S520 standards (www.iicrc.org/store), Principles of Health & Safety at work (Allan St John Holt, IOSH)

The courses you are advised to attend are:

In-house training courses (advanced levels and refreshers), BDMA Masterclasses, Equipment, and product suppliers' courses (advanced levels and refreshers)

The outcomes of the learning experience should be an understanding of:

The complexity of handling customers under stress, the insurance and adjusting industry, health and safety and the law, the wide range of current damage management restoration techniques and methods, the range of drying equipment and techniques available and their appropriate use, the knowledge and experience needed for dealing with and being involved in large complex damage management projects, how to utilise moisture measurements and how the construction constraints of the building being dried affect the drying regime and the results of the moisture measurements obtained, any other issues that affect the outcome of a restoration project, including knowledge of the restoration of contents for both domestic and commercial premises. You should also have the ability, to convey the appropriate information to all relevant parties, in a written or verbal format

Supplementary Information: Learning Resources

Practitioners aiming to gain accreditation at Technician or Senior Technician level are required register for the *BDMA Official Damage Management Training & Reference eLearning Module*.

To assist in the study of BDMA disciplines and the damage management industry, it may be necessary to invest time in reviewing additional information from a variety of knowledge sources.

The following are suggested documents, publications, and resources you may find useful as part of your learning experience, or as a means of reviewing and keeping up to date with developments in the damage management industry. These resources can also be utilised to support your ongoing Continuous Professional Development (CPD) targets.

BDMA Technician (Level 1) – *Supplementary information you may want to read:*

Customer Care Excellence (Sarah Cook) ISBN 0-749-45066-5

Principles of Health & Safety at work (*Allan St John Holt, IOSH*) ISBN 978 0 901357434

BDMA e-Academy: Construction Techniques eLearning Module

Dampness in Buildings (*T.A. Oxley and E.G. Gobert*) ISBN 0-408-01463-6*

Standard for the repair of buildings following flooding (*CIRIA C623*) ISBN 0-86017-623-1
Restorative Drying (*Dri-eaz*) ISBN 0-9776701-0-4

Flooding and Historic Buildings – Technical Advice Note, (*English Heritage*)
The Standard Magazine – order via BDMA

Senior Technician (Level 2) – *Supplementary information you may want to read:*

Principles of Health & Safety at work (*Allan St John Holt, IOSH*) ISBN 978 0 901357434

BDMA e-Academy Construction Techniques eLearning Module

Dampness in Buildings (*T.A. Oxley and E.G. Gobert*) ISBN 0-408-01463-6 (This book is no longer in print but second-hand copies can be sourced online)

Standard for the repair of buildings following flooding (*CIRIA C623*) ISBN 0-86017-623-1
Restorative Drying (*Dri-eaz*) ISBN 0-9776701-0-4

Diagnosing Damp (*Ralph Burkinshaw & Mike Parrett*) ISBN 1-84219-097-0
Remedying Damp (*Ralph Burkinshaw*) ISBN 978-1-84219-305-1

Business Continuity Standard BS25999 & ISO/IEC 27031

Flooding and Historic Buildings – Technical Advice Note, (*English Heritage*)

Repair and Renovation after flood – Guidance notes) BRE (*Building Research Establishment*)
The Standard Magazine – order via BDMA

Websites that may provide information to support your learning activity:

FSA – www.fsa.gov.uk – FSA Handbook, Treating Customers Fairly (use search facility on FSA

website) Chartered Institute of Environmental Health – www.cieh.org

Chartered Insurance Institute - www.cii.co.uk

British Institute of Cleaning Science – www.bics.org.uk

[BDMA e-Academy](http://www.bdma.org.uk) – www.bdma.org.uk

Please check the BDMA website for updates to this document, as further material will be added from time to time. If you are aware of any documents, websites or resources that would be useful to damage management technicians please email details to learning@bdma.org.uk