

UNIT CODE	NAT10913005
UNIT TITLE	Conduct an assessment of a water-damaged home
APPLICATION	<p>This unit applies to building biologists, builders, restorers, mould remediators, pest controllers and any other individuals who, as part of their occupation or work role, conduct an assessment of a water-damaged building.</p> <p>It requires knowledge of psychrometrics, sources of moisture that may impact the built environment, and the adverse health effects arising from exposure to the 'chemical stew' of biotoxins unique to a water-damaged building. It requires the skills to undertake an exposure history, conduct a site inspection, identify visible mould and damp odours, calibrate and use the equipment, undertake a moisture survey and quantify moisture-laden materials, and establish a sampling plan to determine the boundary of fungal particulate spread. It requires the skills to conduct air, surface and dust samples for bioaerosols, analyse laboratory results and compare them to relevant exposure standards and to select and wear appropriate personal protective equipment. It requires the ability to identify suitable professionals to refer mould affected clients and/or abate moisture control and/or conduct remediation.</p> <p>No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.</p>
COMPETENCY FIELD	050999 Environmental Studies, nec
ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes of the unit	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan to assess a water-damaged building	<p>1.1 Define the scope and objectives of the assessment taking into consideration the client's concern with the site, health effects, risk and building history</p> <p>1.2. Develop a client questionnaire and checklist that incorporates the Moisture Mapping tool and NIOSH Dampness and Mould Assessment Form to conduct the assessment</p>

	<p>1.1 Identify external and internal sources of moisture that impact the built environment</p> <p>1.2 Research the adverse health effects arising from exposure to biotoxins in a water-damaged building</p> <p>1.3 Research exposure standards relating to mould</p> <p>1.4 Identify accredited laboratories to analyse samples</p> <p>1.5 Apply knowledge of workplace health and safety to identify potential risk environments</p> <p>1.6 Assign timing, schedule and responsibilities for the assessment</p>
2. Select appropriate assessment tools and equipment	<p>2.1 Select equipment to conduct an assessment of a water-damaged building</p> <p>2.2 Check calibration certificates and expiry dates</p> <p>2.3 Test assessment tools and modify as required</p> <p>2.4 Calibrate equipment as per manufacturer's instructions</p> <p>2.5 Select appropriate personal protective equipment</p>
3 Undertake an assessment of a water-damaged building	<p>3.1 Conduct a visual inspection of the site for evidence of moisture ingress, condensation and visible mould using the NIOSH Dampness and Mould Assessment form</p> <p>3.2 Conduct an olfactory inspection of the site for damp, musty odours</p> <p>3.3 Use equipment and the Moisture Mapping tool to locate and quantify moisture-laden materials that support microbial growth</p> <p>3.4 Develop a sampling plan to establish the boundary of fungal particulate spread</p> <p>3.5 Document and retain records of information, data and findings</p> <p>3.6 Prepare the chain of custody documentation and send samples to the laboratory</p>
4 Analyse results	<p>4.1 Analyse laboratory results and findings</p>

	4.2	Compare data results and findings with the relevant exposure standards to assess risk to client and consequences of findings
5	Make recommendations to reduce exposure	<p>5.1 Provide recommendations to mitigate moisture, address moisture-laden materials, remove fungal particulate and/or conduct more sampling</p> <p>5.2 Identify key personnel required to remediate a water-damaged building</p>
6	Report the outcomes of the mould assessment	<p>6.1 Document assessment findings and recommendations in a professional report</p> <p>6.2 Present objective evidence with clear and concise references from authoritative sources</p>

FOUNDATION SKILLS

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

Skill	Description
Reading skills to:	<p>Evaluate the various sources of written information on dampness and mould in the scientific literature.</p> <p>Follow instructions and technical drawings presented in equipment and instruction manuals.</p> <p>Read text which includes specialised vocabulary to gather information and create questions to be answered.</p> <p>Understand text which includes symbols and embedded technical information in relation to laboratory reports.</p>
Writing skills to:	<p>Use a variety of words and grammatical structures to achieve precise meaning in client questionnaire, checklist and report.</p> <p>Address the context, purpose and audience when generating text.</p> <p>Include glossary to explain technical terms.</p>
Oral communication skills to:	<p>Listen in order to take notes about key points from a spoken conversation within the context of discussions with a client.</p>



	Determine customer requirements through open-ended questioning, active listening, paraphrasing and summarising.		
Numeracy skills to:	Organise mathematical information to use a psychrometric chart, and analyse laboratory findings as an aid to solving a problem. Use and apply knowledge about probability to the context of conducting a mould assessment.		
Learning skills to:	Research relevant background and professional information in order to determine the appropriateness of the information for the context of a mould assessment.		
Problem-solving skills to:	The skills to identify sources of moisture unique to the site, gather data and establish a sampling plan and identify key personnel required to solve complex problems.		
Self-management skills to:	Use simple organising methods to manage reference material.		
Technology skills to:	Use software capabilities to insert references. Use software and the internet to store and access information and project documentation.		
UNIT MAPPING INFORMATION			
	Code and Title Current Version	Code and Title Previous Version	Comments
	NAT10913005 Conduct an assessment of a water-damaged home	BLDBIO605 Conduct a mould assessment	Equivalent unit

TITLE	Assessment Requirements for NAT10913005 Conduct an assessment of a water-damaged home
PERFORMANCE EVIDENCE	The learner must show evidence of the ability to complete tasks outlined in elements and performance criteria of this unit and manage tasks and contingencies in the context of the role of a Building Biology Consultant. There must be demonstrated evidence that the learner has completed the following tasks: <ul style="list-style-type: none"> Analysed at least one client's home

	<ul style="list-style-type: none"> • Used communication and questioning skills to determine the client's needs, health issues and building history (moisture ingress, age) • Created a client questionnaire • Developed a checklist that incorporates the NIOSH Dampness and Mould Assessment form and Moisture Mapping tool • Identified sources of moisture unique to the site • Researched the adverse health effects arising from exposure to a water-damaged building • Identified visible mould and damp, musty odours using the 'NIOSH Dampness and Mould Assessment Form' • Used testing equipment and the Moisture Mapping Tool to locate and quantify moisture-laden materials • Developed a sampling plan to establish boundary of fungal particulate spread • Calibrated and demonstrate correct use of equipment • Analysed laboratory results and compared results with relevant exposure standards • Identified key personnel required to remediate a water-damaged building • Produced a client report containing assessment findings and recommendations • Used computer software
<p>KNOWLEDGE EVIDENCE</p>	<p>The learner must be able to demonstrate essential knowledge required to effectively do the tasks outlined in the elements and performance criteria of this unit, and manage the tasks and contingencies in the context of variable building sites and client needs. This includes knowledge of:</p> <ul style="list-style-type: none"> • Internal and external sources of moisture (liquid water and water vapour) that may impact the built environment • Exposure standards relating to mould • Adverse health effects arising from exposure to a water-damaged building

	<ul style="list-style-type: none"> • Principles that underpin psychrometry • Categories and classes of water loss • Knowledge of water activity (Aw) and its relevance to fungi • Fungi typically found in a water-damaged building • Heating, ventilation and air conditioning systems in order to take a sample • Chain of Custody form documentation • Workplace health and safety to identify potential risky environments • Assessment tools include NIOSH Dampness and Mould Assessment form and the Moisture Mapping tool • Testing equipment to conduct a moisture assessment such as an indoor air quality meter, thermal imaging camera, borescope, moisture meter, camera and carpet aw • Testing equipment required to conduct bioaerosol sampling (biopump, Air-o-Cells cassettes, Via Cell cassettes), surface sampling (tape lift, biotapes and ATP meter) and bulk sampling (ERMI) • Personal protective equipment relevant to water-damaged homes • Open and closed drying system • Principles of mould remediation as outlined by the IICRC S520 • HVAC specialist, hydrologists, mould remediators, plumbers and companies specialising in drainage and/or moisture ingress affecting the built environment • Companies specialising in laundering contents affected by mould • Accredited laboratories to analyse biotoxins
<p>ASSESSMENT CONDITIONS</p>	<p>Both practical skills and knowledge must be assessed. Skills must be demonstrated in a simulated environment or a real-life working environment, such as a client's home. Learners must have access to all relevant equipment and resources required to assess a water-damaged building.</p> <p>Assessment methods must include:</p>

	<ul style="list-style-type: none">• knowledge questions/quiz• client questionnaire• checklist• written professional report• photographic evidence taken of the home• practical assessment in a simulated environment <p>Assessor Requirements</p> <p>Assessors must:</p> <ul style="list-style-type: none">• have a minimum of two years' experience working as a Building Biologist.
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