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Qualification Specification

Highfield Level 2 Award in Legionella Awareness (RQF)

Qualification Number: 601/2972/4

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Highfield Level 2 Award in Legionella Awareness (RQF)

Introduction

This qualification specification is designed to outline all you need to know to offer this qualification at your centre. If you have any further questions, please contact your account manager

Qualification regulation and support

The Highfield Level 2 Award in Legionella Awareness (RQF) has been developed and is awarded by Highfield Qualifications and sits on the Regulated Qualifications Framework (RQF). The RQF is a qualification framework regulated by Ofqual and CCEA Regulation. It is also suitable for delivery in Wales and is regulated by Qualifications Wales.

Key facts

Qualification number:	601/2972/4
Learning aim reference:	60129724
Credit value:	1
Assessment method:	Learner workbook
Guided learning hours (GLH):	8
Total qualification time (TQT):	8

Qualification overview and objective

The objective of the qualification is to support a role in the workplace and is for learners who work in environments where legionella growth is a risk. It aims to raise awareness in order to prevent waterborne disease caused by legionella bacteria.

The qualification provides learners with the knowledge and understanding of the health effects of Legionnaires' disease, the control measures that should be in place to prevent it as well as the consequences for not complying with relevant legislation and codes of practice. In addition, this qualification contains specialist units covering the risks associated with either cooling towers and evaporative condensers or hot and cold-water systems.

It contains two pathways which should be relevant to the learner's workplace:

- Pathway 1 Cooling towers and evaporative condensers
- Pathway 2 Hot and cold-water systems

Entry requirements

In order to register on to this qualification, learners are required to meet the following entry requirements:

- 16 years of age or above
- Minimum of Level 1 English, or equivalent

Delivery/assessment ratios

To effectively deliver and assess this qualification, it is recommended that centres do not exceed the ratio of 12 learners to one tutor/assessor.

Guidance on delivery

The total qualification time for this qualification is 8, inclusive of guided learning hours.

TQT is an estimate of the total number of hours it would take an average learner to achieve and demonstrate the necessary level of attainment to be awarded with a qualification, both under direct supervision (forming guided learning hours) and without supervision (all other time). TQT and GLH values are advisory and assigned to a qualification as guidance.

Guidance on assessment

This qualification is assessed by learner workbook. This assessment model requires learners to provide a short response to prescribed questions within a workbook set by Highfield. Successful learners will have to demonstrate knowledge and understanding across the breadth of the qualification syllabus.

Centres must take all reasonable steps to avoid any part of the assessment of a learner (including any internal quality assurance and invigilation) being undertaken by any person who has a personal interest in the result of the assessment.

Guidance on quality assurance

Highfield Qualifications requires centres to have in place a robust mechanism for internal quality assurance of training delivery and internal assessment processes.

Internal quality assurance must be completed by an appropriately qualified person and that person must not have been involved in any aspect of the delivery or assessment of the course they are quality assuring.

Highfield will support centres by conducting ongoing engagements to ensure and verify the effective and efficient delivery of the qualification.

Recognition of prior learning (RPL)

Centres may apply to use recognition of prior learning or prior achievement to reduce the amount of time spent in preparing the learner for assessment.

For further information on how centres can apply to use RPL as described above, please refer to the Recognition of Prior Learning (RPL) policy in the members' area of the Highfield website. This policy should be read in conjunction with this specification and all other relevant Highfield documentation.

Tutor requirements

Highfield recommends nominated tutors for this qualification meet the following:

- hold a relevant subject area qualification or have appropriate experience:
Pathway 1: Cooling Towers and Evaporative Condensers

Suitable subject area qualifications or experience may include:

- Highfield Level 3 Award in Legionella Control for Responsible Persons (RQF)
- Degree or Dip HE in a related subject such as: chemistry, microbiology
- HNC/D in a related subject (as outlined above)

- If nominated tutors do not hold a suitable qualification, it is recommended that they have a minimum of 5 years' experience in the water treatment industry.

Pathway 2: Hot and Cold-Water Systems

Suitable subject area qualifications or experience may include:

- Highfield Level 3 Award in Legionella Control for Responsible Persons (RQF)
 - Degree or Dip HE in a related subject such as: chemistry, microbiology
 - HNC/D in a related subject (as outlined above)
 - If nominated tutors do not hold a suitable qualification, it is recommended they have a minimum of 3 years' experience in facilities management (or similar role) within industries that deal with risk of legionella (such as the leisure industry).
- hold or be working towards a recognised teaching qualification or have experience which could include any of the following:
 - Highfield Level 3 Award in Delivering Training (RQF)
 - Highfield Level 3 International Award in Delivering Training (IADT)
 - Level 3 Award in Education and Training or above
 - Diploma or Certificate in Education
 - Level 3 or 4 NVQ in Training and/or Development
 - Professional Trainers Certificate
 - Proof of at least 30 hours of training in any subject
 - maintain appropriate continued professional development for the subject area

This person may also act as the assessor.

Assessor requirements

Highfield strongly recommends nominated assessors for this qualification meet the following:

- hold a relevant subject area qualification or have appropriate experience:

Pathway 1: Cooling Towers and Evaporative Condensers

Suitable subject area qualifications or experience may include:

- Highfield Level 3 Award in Legionella Control for Responsible Persons (RQF)
- Degree or Dip HE in a related subject such as: chemistry, microbiology
- HNC/D in a related subject (as outlined above)
- If assessors do not hold a suitable qualification, it is recommended that they have a minimum of 5 years' experience in the water treatment industry

Pathway 2: Hot and Cold-Water Systems

Suitable subject area qualifications or experience may include:

- Highfield Level 3 Award in Legionella Control for Responsible Persons (RQF)
 - Degree or Dip HE in a related subject such as: chemistry, microbiology
 - HNC/D in a related subject (as outlined above)
 - If assessors do not hold a suitable qualification, it is recommended they have a minimum of 3 years' experience in facilities management (or similar role) within industries that deal with risk of legionella (such as the leisure industry)
-

- have knowledge and experience in assessment of learners' work and quality assurance procedures. **It is not** a requirement for assessors to hold a formal assessor qualification although it is recognised as good practice
- maintain appropriate continued professional development for the subject area

This person may also act as the tutor

Internal quality assurance (IQA) requirements

Highfield recommends internal quality assurers for this qualification meet the following:

- have relevant subject area knowledge or experience
 - have experience and/or knowledge of internal quality assurance processes. It is not a requirement for assessors to hold a formal IQA qualification although it is recognised as good practice.
 - maintain appropriate continued professional development for the subject area
-

Reasonable adjustments and special considerations

Highfield has measures in place for learners who require additional support. Please refer to Highfield Qualifications Reasonable Adjustments Policy for further information/guidance.

ID requirements

It is the responsibility of the centre to have systems in place to ensure that the person taking an assessment is indeed the person they are claiming to be. All centres are therefore required to ensure that each learner's identification is checked before they undertake the assessment. Highfield recommends the following as proof of a learner's identity:

- a valid passport (any nationality)
- a signed UK photocard driving licence
- a valid warrant card issued by HM forces or the police
- another photographic ID card, e.g. employee ID card, student ID card, travel card etc.

If a learner is unable to produce any of the forms of photographic identification listed above, a centre may accept another form of identification containing a signature, for example, a credit card. Identification by a third-party representative, such as a line manager, human resources manager or invigilator, will also be accepted.

For more information on learner ID requirements, please refer to Highfield Qualifications' Core Manual.

Progression opportunities

On successful completion of this qualification, learners may wish to continue their development by undertaking one of the following qualifications:

- Highfield Level 3 Award in Legionella Control for Responsible Persons
 - Highfield Level 3 Award in Health and Safety within the Workplace
 - Highfield Level 3 Award in Risk Assessment
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Useful websites

- www.highfieldqualifications.com (Highfield Qualifications)
- www.highfield.co.uk (Highfield Products)
- www.hse.gov.uk (Health and Safety Executive)

Appendix 1: Qualification structure

To complete the **Highfield Level 2 Award in Legionella Awareness (RQF)** learners must achieve a minimum of **2 credits** overall:

- The unit in the mandatory group totaling **1 credit**; and
- One specialist pathway, totaling 1 credit.

Mandatory Group

Learners must achieve **all units** in this group

Unit reference	Unit Title	Level	GLH	Credit
R/506/1503	Principles of legionella awareness	2	4	1

PATHWAY 1:

Highfield Level 2 Award in Legionella Awareness (Cooling Towers and Evaporative Condensers) (RQF)

Learners must achieve **all units** in this group:

Unit reference	Unit Title	Level	GLH	Credit
Y/506/1504	Understanding the risks associated with legionella in cooling towers and evaporative condensers	2	4	1

PATHWAY 2:

Highfield Level 2 Award in Legionella Awareness (Hot and Cold-Water Systems) (RQF)

Learners must achieve **all units** in this group:

Unit reference	Unit Title	Level	GLH	Credit
D/506/1505	Understanding the risks associated with legionella in hot and cold-water systems	2	4	1

Appendix 2: Qualification content

Unit 1: Principles of Legionella Awareness

Unit number: R/506/1503

Credit: 1

GLH: 4

Level: 2

Learning Outcomes	Assessment Criteria
<i>The learner will</i>	<i>The learner can</i>
1. Understand the health risks associated with legionella bacteria	1.1 Describe the conditions required for legionella bacteria to multiply 1.2 Describe the methods of transmission and infection 1.3 Describe the typical symptoms of Legionnaires’ disease 1.4 Identify the groups of people most commonly at risk to infection
2. Understand how legislation and codes of practice can support the management of legionella bacteria	2.1 Identify legislation and codes of practice relating to the management of legionella bacteria 2.2 Outline the consequences for non-compliance with legislation and codes of practice relating to the management of legionella bacteria 2.3 Outline key roles and responsibilities associated with the management of legionella bacteria
3. Understand how to control the risks of legionella bacteria	3.1 Outline the process of risk management 3.2 Explain the importance of competent staff 3.3 Explain the importance of a formal review

Amplification

This section of the specification expands on the assessment criteria defined in the above unit and includes suggested content that a training course should cover in order to adequately prepare learners for the assessment.

LO1: 1. Understand the health risks associated with legionella bacteria

- The conditions required for legionella bacteria to multiply:
 - Temperatures between 20°C and 50°C
 - The presence of biofilm, nutrients or other microorganisms
 - Stationary and stagnant water
 - Oxygen
 - How legionella bacteria multiply – identically double
- The methods of transmission and infection:
 - Inhalation of contaminated aerosols
 - Inhalation of droplet nuclei
 - How using this knowledge, we can try and avoid the transmission of the disease

- The typical symptoms of Legionnaires' disease:
 - Initial symptoms of fever, chills, headache and muscle pain
 - Dry non-productive cough and severe breathing difficulties
 - Confusion, delirium, diarrhoea and vomiting
 - The difference between Legionnaires' disease and pontiac fever
- The groups of people most commonly at risk:
 - Men
 - The elderly
 - Individuals with compromised immune systems
 - Why some people are more susceptible
 - How it is difficult to prevent individuals physically being exposed to the risk

LO2: Understand how legislation and codes of practice can support the management of legionella bacteria

- Legislation and codes of practice relating to the management of legionella bacteria:
 - The purpose of the Approved Code of Practice L8
 - The difference between the Approved Code of Practice and the Technical Guidance (HSG274)
 - Its relationship with The Health and Safety at Work Act, COSHH and RIDDOR
- The consequences for non-compliance with legislation and codes of practice relating to the management of legionella bacteria
 - The approach of the HSE to investigate a case or an outbreak of Legionnaires' disease (depending on the circumstances)
 - How failing to comply with the Approved Code of Practice L8 can lead to:
 - Improvement notices
 - Prohibition notices
 - Letter
 - Criminal charges
- The key roles and responsibilities associated with the management of legionella bacteria:
 - Duty Holder: Legally responsible to ensure a risk assessment is carried out, to ensure a written scheme is in place and to appoint a competent person (or persons), known as the Responsible Person, to manage the risk
 - Responsible Person: Responsible for implementing the control measures outlined within the written scheme
 - Authorised Deputies: To take on the responsibilities of the Responsible Person when they are absent
 - Operators: individuals appointed to carry out the tasks within the written scheme.

LO3: Understand how to control the risks of legionella bacteria

- The process of risk management:
 - Legionella risk assessment
 - Produce and implement a written control scheme

- Appoint competent staff
- Records and ongoing maintenance
- Review
- The importance of competent staff:
 - Knowledge and training (both formal and hands-on training)
 - The importance of individuals understanding their roles and carrying out tasks in a safe and competent manner
- The importance of a formal review:
 - The circumstances for when a formal review is required
 - If significant changes have been made to the system
 - If changes have been made to the responsibility structure
 - If routine monitoring indicates that the system may no longer be under control
 - If there is an outbreak near to or associated with the system
 - The requirements for reviewing the risk assessment and the written control scheme, including:
 - Management structure
 - Competence of staff
 - Roles and responsibilities of staff including any changes
 - Schematic diagram
 - Design of the system and changes to the system
 - Risk of legionella contamination and multiplication in the system
 - Risk of exposure in the area
 - Control scheme
 - Records
 - Control in last period and any corrections implemented

Unit 2: Understanding the risks associated with legionella in cooling towers and evaporative condensers

Unit number: Y/506/1504

Credit: 1

GLH: 4

Level: 2

Learning Outcomes	Assessment Criteria
<i>The learner will</i>	<i>The learner can</i>
<p>1. Understand the risks associated with legionella bacteria in cooling towers and evaporative condensers</p>	<p>1.1 Outline how cooling towers and evaporative condensers operate</p> <p>1.2 Describe the factors that contribute to the risk of legionella bacteria within cooling towers and evaporative condensers</p>
<p>2. Know how to control the risks associated with legionella bacteria in cooling towers and evaporative condensers</p>	<p>2.1 Explain the requirement for routine monitoring</p> <p>2.2 Describe the requirements for routine chemical testing</p> <p>2.3 Describe the requirements for routine physical checks</p> <p>2.4 State the requirement for carrying out legionella testing</p> <p>2.5 Explain the requirements for cleaning and disinfection</p>

Amplification

This section of the specification expands on the assessment criteria defined in the above unit and includes suggested content that a training course should cover in order to adequately prepare learners for the assessment.

LO1: Understand the risks associated with legionella bacteria in cooling towers and evaporative condensers

- How cooling towers and evaporative condensers operate:
 - How a tower/condenser uses the process of evaporation to work
 - The individual parts of tower/condenser and their purpose
- The factors that contribute to the risk within cooling towers and evaporative condensers:
 - Why a tower/condenser poses a risk:
 - Generation of aerosols
 - Distribution of aerosols
 - Temperature
 - Nutrients
 - Contamination
 - Biofilm

LO2: Know how to control the risk of legionella bacteria in cooling towers and evaporative condensers

- The requirement for routine monitoring:
 - Checks required on a weekly and monthly basis
 - How these checks contribute towards controlling the risk factors within a system
- The requirements for routine chemical testing
 - Weekly chemical checks required on site and how to correct control
 - Recording of results
 - Oxidising and non-oxidising biocides
- The requirements for routine physical checks
 - Weekly, monthly and/or quarterly physical checks required on site
 - Recording of results
 - Remedial actions
- The requirements for carrying out legionella testing
 - The circumstances for when a legionella test is required
 - Interpretation of results
 - Course of action in response to a positive result
- The requirements for cleaning and disinfection
 - Basic steps to clean a tower
 - The minimum frequency and the circumstances under which additional cleans are required

Unit 3: Understanding the risks associated with legionella in hot and cold-water systems
 Unit number: D/506/1505
 Credit: 1
 GLH: 4
 Level: 2

Learning Outcomes	Assessment Criteria
<i>The learner will</i>	<i>The learner can</i>
1. Understand the risks associated with legionella bacteria in hot and cold-water systems	1.1 Outline how hot and cold-water systems operate 1.2 Describe the factors that contribute to the risk of legionella bacteria within hot and cold-water systems
2. Know how to control the risks associated with legionella bacteria in hot and cold-water systems	2.1 Explain the requirement for routine monitoring 2.2 Describe the requirements for routine checks of the system 2.3 State the requirement for carrying out legionella testing 2.4 Explain the requirements for cleaning and disinfection

Amplification
<p>This section of the specification expands on the assessment criteria defined in the above unit and includes suggested content that a training course should cover in order to adequately prepare learners for the assessment.</p> <p>LO1: Understand the risks associated with legionella bacteria in hot and cold-water systems</p> <ul style="list-style-type: none"> • How hot and cold-water systems operate: <ul style="list-style-type: none"> ○ The basic components of a hot and cold-water system ○ Why their design and method of operation can cause systems to present a risk • The factors that contribute to the risk within hot and cold-water systems: <ul style="list-style-type: none"> ○ Why systems pose a risk, including: <ul style="list-style-type: none"> ▪ Generation of aerosols ▪ Stagnant conditions ▪ Low use of systems ▪ Temperature of operation ▪ Nutrients ▪ Biofilm ○ How removing parts of the system and controlling the operation of the system can be used to minimise and control the risk factors <p>LO2: Know how to control the risk of legionella bacteria in hot and cold-water systems</p> <ul style="list-style-type: none"> • The requirement for routine monitoring: <ul style="list-style-type: none"> ○ How monitoring and checks contribute towards controlling the risk factors within a system

- The requirements for routine checks of the system:
 - The checks that are required:
 - Weekly physical (and chemical) tasks required on site
 - Monthly and quarterly physical (and chemical) checks and tasks required on site
 - Six-monthly physical (and chemical) checks and tasks required on site
 - Annual physical (and chemical) checks and tasks required on site
 - Where these checks need to be conducted and how to correct control
 - Recording of results
 - The role of oxidising and non-oxidising biocides
 - The requirements of the Water Supply (Water Quality) Regulations 2000
- The requirement for carrying out legionella testing
 - The circumstances for when a legionella test is carried out
 - Interpretation of results
 - The course of action in response to a positive result
- The requirements for cleaning and disinfection
 - Basic steps for cleaning a hot and cold-water system
 - The circumstances under which cleans are required

Appendix 3: Sample assessment material

Highfield has developed learner assessment packs which contain a number of tasks and questions. This is supported by a Tutor, Assessor and IQA Support Pack which is available to download from the members' area of the Highfield website.

1. List three conditions legionella bacteria need in order to grow and multiply in a system.		AC (1.1) Outcome
1.		
2.		
3.		

2. Are the following statements true or false?			AC (1.2) Outcome
Statement	True	False	
People catch Legionnaires' disease after inhaling infected aerosols or small droplets of water			
People can become infected by drinking water contaminated with legionella bacteria			
It is possible to catch Legionnaires' disease from another person			
The majority of people exposed to legionella bacteria do not develop Legionnaires' disease			

3. List four possible symptoms of Legionnaires' disease.		AC (1.3) Outcome
1.		
2.		
3.		
4.		