Level 2 Award in Pest Management

July 2016

Total Qualification Time: 103
Guided Learning Hours: 53

Ofqual Qualification Number 500/8797/6

Description

This Level 2 qualification is designed to provide an understanding of public health pests and their management. It fulfils the legal requirement relating to the training of pest control technicians as set out in the Control of Pesticides Regulations 1986. Whilst not intended exclusively for people working in pest management, candidates who are, or are intending to be, so employed will be better equipped to carry out their professional duties safely, efficiently and humanely. The syllabus covers the management of rodents, non-rodent mammals, birds and invertebrates, health and safety and accident prevention, legislation and customer care.

The qualification is divided into three units (Vertebrate Pests, Invertebrate Pests and Health, Safety and Legal Aspects).

This qualification was produced with the support and endorsement of the National Pest Technicians Association

Content:

Unit PM2.1: Vertebrate Pest Management

Unit Level: 2
Unit reference number: R/601/6121

Summary of Outcomes:

To achieve this unit a candidate must:

1. Understand the biology, behaviour and need for management of a range of vertebrate pests, *by being able to meet the following assessment criteria:*

1.1 Identify a range of vertebrate pests
1.2 Relate aspects of the animals' biology and behaviour to their importance as a pest
1.3 Explain the need to manage vertebrate pests

2. Know how to evaluate the site of an infestation of vertebrate pests, *by being able to meet the following assessment criteria:*

2.1 Determine the size and nature of an infestation
2.2 Recognise structural features that may contribute to an infestation
2.3 Describe environmental factors that affect an infestation
2.4 Propose methods for the management of vertebrate pests

3. Know methods for the management of vertebrate pests, *by being able to meet the following assessment criteria:*

3.1 Review non-chemical methods for the management of vertebrate pests
3.2 Describe chemical methods for the management of vertebrate pests
3.3 Explain post-treatment procedures

Content:

1 Biology of vertebrate pests

1.1 *Biology:* identification of rodent species and other vertebrates able to achieve pest status; biology and life cycles of these animals relevant to their pest status.

1.2 *Behaviour:* behaviour of these animals relevant to their pest status; environmental requirements for development of infestation; nature, reasons, sources of and evidence for infestation.

1.3 *Need for management:* damage to structures and services, diseases carried, food spoilage and contamination, nuisance factors; legislative requirements.

2 Evaluation of the site of an infestation

2.1 *Size and nature of an infestation:* survey methods; evidence of infestation; importance of client information, personal observation and past history of the site; source of pests, harbourage sites and distribution pathways; sources of food; pest access.

2.2 *Structural features*: general principles of drainage system construction and layout; identification of different types of sewer system; identification of damage to drainage and sewerage systems, appropriate testing systems; importance of defective drainage fitments; building defects and design features associated with infestations; proofing of building; general condition of building and neighbouring properties.

2.3 *Environmental factors*: harbourage sites and sources of food within local environment; features of local environment likely to support an infestation such as communal waste bins, rubbish tips, ponds; problems associated with fly-tipping and bird-feeding.

2.4 *Methods for management*: selection of most appropriate and least hazardous / toxic course of action with particular regard to legislation relating to the course of action and target animal, avoidance of risk to the public, environment, non-target and protected species; risk assessment of site and proposed course of action, including written environmental risk assessments; health and safety considerations.

3 Management of vertebrate pests

3.1 *Non-chemical methods:* hierarchy of control methods; elimination of factors conducive to pest infestation such as harbourage and food; environmental management; good housekeeping of premises; proofing of buildings; repair of pest-related building defects; need to identify responsibility for maintenance and repair of sewers and drains; physical control methods; use and legislative

requirements of specialist trapping equipment; types of traps; reasons for trapping; consideration of humane aspects of use of traps; frequency of inspection of traps; baiting; reasons for avoiding use of irrecoverable baits; shooting and use of dogs; safe handling of live animals; humane despatch of trapped animals.

3.2 *Chemical methods:* procedure(s) to adopt when undertaking stupefying treatment; appraisal of pesticides; selection of appropriate pesticide and formulation with particular regard to toxicity, risk of secondary poisoning and environmental considerations; different modes of action of pesticides on target and non-target species; importance and limitations of LD_{50} and related data in relation to vertebrate toxicity; safe, effective and humane use of pesticides and formulations; distinction between brand names and common names of active ingredients; situations where pesticide application inappropriate; resistance to pesticides; design, construction, maintenance and selection of application equipment; need for correct application.

3.3 *Post-Treatment procedures:* monitoring of effectiveness of treatment; consideration of alternative control methods or extension of treatment if treatment ineffective within recommended target period, possible reasons for treatment being ineffective; recovery of unused bait and chemicals; safe recovery and disposal of dead animals; action in the event of resistance or ineffective treatments; re-instatement of site.

Unit PM2.2: Invertebrate Pest Management

Unit Level: 2
Unit reference number: A/601/6131

Summary of Outcomes:

To achieve this unit a candidate must:

1. Understand the biology, behaviour and need for management of a range of invertebrate pests, *by being able to meet the following assessment criteria:*

1.1 Identify a range of invertebrate pests
1.2 Relate aspects of the animals' biology and behaviour to their importance as a pest
1.3 Explain the need to manage invertebrate pests

2. Know how to evaluate the site of an infestation of invertebrate pests, *by being able to meet the following assessment criteria:*

2.1 Determine the size and nature of an infestation
2.2 Recognise structural features that may contribute to an infestation
2.3 Describe environmental factors that affect an infestation
2.4 Propose methods for the management of invertebrate pests

3. Know methods for the management of invertebrate pests, *by being able to meet the following assessment criteria:*

3.1 Review non-chemical methods for the management of invertebrate pests
3.2 Describe chemical methods for the management of invertebrate pests
3.3 Explain post-treatment procedures

Content:

1 Biology of invertebrate pests

1.1 *Biology:* identification of invertebrate pests; biology and life cycles of these animals relevant to their pest status.

1.2 *Behaviour:* behaviour of these animals relevant to their pest status; environmental requirements for development of infestation; nature, reasons, sources of and evidence for infestation.

1.3 *Need for management:* damage to structures and services; health risks; food spoilage and contamination; nuisance factors; legislative requirements.

2 Evaluation of the site of an infestation

2.1 *Size and nature of an infestation:* survey methods; evidence of infestation; importance of client information, personal observation and past history of the site; source of pests, harbourage sites and distribution pathways; sources of food; pest access.

2.2 *Structural features*: building defects and design features associated with infestations; importance of services and ducting; proofing of building; general condition of building and neighbouring properties.

2.3 *Environmental factors*: harbourage sites and sources of food within local environment; features of local environment likely to support an infestation such as communal waste bins, rubbish tips; problems associated with refuse chutes in high-rise buildings and fly-tipping.

2.4 *Methods for management*: selection of most appropriate and least hazardous / toxic course of action with particular regard to legislation relating to the course of action and target animal, avoidance of risk to the public, environment, non-target and protected species; risk assessment of site and proposed course of action; health and safety considerations.

3 Management of invertebrate pests

3.1 *Non-chemical methods:* hierarchy of control methods; elimination of factors conducive to pest infestation such as harbourage and food; environmental management; good housekeeping of premises; proofing of buildings; repair of pest-related building defects; physical control methods.

3.2 *Chemical methods:* procedure(s) to adopt when undertaking treatment; appraisal of pesticides; selection of appropriate pesticide and formulation with particular regard to toxicity and environmental considerations; different modes of action of pesticides on target and non-target species; importance and limitations of LD_{50} and related data in relation to toxicity; safe and effective use

of pesticides and formulations; distinction between brand names and common names of active ingredients; situations where pesticide application inappropriate; resistance to pesticides; design, construction, maintenance and selection of application equipment; need for correct application.

3.3 *Post-Treatment procedures:* monitoring of effectiveness of treatment; consideration of alternative control methods or extension of treatment if treatment ineffective within recommended target period, possible reasons for treatment being ineffective; recovery of unused bait and chemicals; action in the event of resistance or ineffective control programmes; re-instatement of site.

Unit PM2.3: Health, Safety and Legal Aspects of Pest Management

Unit Level: 2
Unit reference number: D/601/6140

Summary of Outcomes:

To achieve this unit a candidate must:

1. Know aspects of health and safety relevant to pest management, *by being able to meet the following assessment criteria:*

1.1 Outline legislative requirements for health and safety relevant to pest management
1.2 Identify hazards relating to pest management and procedures for working safely

2. Know legislation relevant to pest management, *by being able to meet the following assessment criteria:*

2.1 Outline legislation relevant to pest management

3. Understand the importance of recording and communicating information concerning health, safety and legal aspects of pest management, *by being able to meet the following assessment criteria:*

3.1 Outline the importance of recording information concerning health, safety and legal aspects of pest management
3.2 Outline the importance of communicating information concerning health, safety and legal aspects of pest management to clients.

Content:

1 Health and Safety

1.1 *Health and Safety:* employers' and employees' duties, responsibilities and obligations relating to Health and Safety at Work Act 1974; welfare provisions of 1974 act; requirements of COSHH regulations relating to pest control services; Biocidal Products Regulations 2001 and Biocidal Products (Amendment) Regulations 2003; use and limitations of personal protective equipment; general requirements of Food and Environment Protection Act 1985 Part 3 and the Control of Pesticides Regulations 1986; any superseding legislation or amendments to the above.

1.2 *Hazards and working safely:* implications of working in confined spaces, to include lofts, ducting and sewers; safe use of pesticides; implications of working at height, to include steps, ladders and platforms; importance of following safety instructions; risk of exposure to biohazards; fire hazards; accident, incident and "near miss" reporting; required and appropriate safety features of pest control vehicles; design and construction features of pesticide store; labelling of pesticide containers; storage, transport and disposal of chemicals; hazardous waste disposal procedures; avoidance of spillage of hazardous materials; clean up of spillages; what to do in the event of an emergency Relevant legislation relating to the above.

2 Legislation

2.1 *Legislation:* legal powers and obligations of local authorities, owners and occupiers with regard to powers of entry, notification, inspection and rodent control under the Prevention of Damage by Pests Act 1949; general requirements of Public Health Acts 1936 and 1961 with respect to disconnection and sealing of disused drains, destruction or removal of vermin and specified urban bird pests; Wildlife and Countryside Act 1981 with regard to protection of flora and fauna, excepted species in Part II Schedule II, permitted methods of control; Class and General licences with regard to control of birds; Animal Welfare Act 2006; Wild mammal protection Act 1996; Grey Squirrels (Warfarin) Order 1973, Pests Act 1954; Food Safety Act 1990; Food Hygiene Regulations 2006 with regard to prevention of pest infestations and control of pests in food premises and equipment; any superseding legislation or amendments to the above.

3 Recording and communicating information

3.1 *Recording information:* importance of maintaining accurate records; legal requirements relating to record keeping; records relating to storage, use and disposal of pesticides and the use of other resources, survey data, location and number of traps and baits, visits to traps, risk assessments, servicing of equipment, incidents of malfunction of equipment; customer information records.

3.2 *Communicating information to clients:* need for clear communication and appropriate responses in difficult situations and with regard to health and safety, to include the importance of effective communication with ethnic minorities and speakers of other languages and awareness of cultural sensibilities; need to report client comments, complaints and suggestions to managers; need to advise clients of pest control measures taken, location of any baits laid and possible future visits to site; need to advise clients of remedial action required with regard to infestations; need to advise clients on housekeeping and maintenance required for prevention of reinfestation; importance of a professional approach to clients; need to suggest alternative remedies in event of objections to specific course of treatment.

Assessment and Grading

Attainment of the Learning Outcomes for units PM2.1 – PM2.3 will be assessed by a synoptic examination set by RSPH Qualifications. The examination will consist of three sections each consisting of fifteen questions, section 1 will assess the learning outcomes of Unit PM2.1; section 2 will assess the learning outcomes for Unit PM2.2; section 3 will assess the learning outcomes for Unit PM2.3.

The qualification is graded as either *Pass* or *Distinction*.

In order to be awarded a *Distinction,* candidates must, *for units PM2.1 – PM2.3*, be able to recall relevant knowledge and facts from the entire specification with few significant omissions and demonstrate a high level of understanding of the principles and concepts used in Pest Management. The majority of answers to examination questions will be correct and relevant. Candidates who attain a mark of 80% or greater *in each* of these units will be deemed to have achieved the criteria for a *Distinction.*

In order to be awarded a *Pass,* candidates must, *for all units*, be able to recall relevant knowledge and facts from some parts of the specification and demonstrate a satisfactory level of understanding of the principles and concepts used in Pest Management which would allow the candidate to work safely as a Pest Control Technician. The majority of answers to examination questions will contain some information of relevance. Candidates who attain a mark of 50% or greater *in each* of the units will be deemed to have achieved the criteria for a *Pass*.

Candidates who fail to reach the minimum standard for the *Pass* grade will be recorded as having failed. Candidates that have been unsuccessful in individual units can retake these units, but in order to qualify for the Award all units must be successfully taken within one calendar year.

Guidance:

Recommended Reading:

British Pest Management	British Pest Management Manual
CRRU UK Code of Best Practice 2015	Best practice and guidance for rodent control and the safe use of rodenticides
Killgerm, *2013*	Killgerm Operating Manual
Meaney, P*	Carpet beetles, Textile Moths and related insect pests. Pest Flies and their Control Biting and stinging insects and ticks Insect pests of stored food and preparation premises Cockroaches and their control

* These books are available direct from the printers (Polstead Press 5a The Maltings Business Centre, Stowupland Rd, Stowmarket IP14 5AG. Phone:01449 677444) or from Killgerm.

Web-Sites	A number of these web-sites contain copies of Codes of Practice which can be downloaded for free.
Barrettine Ltd	www.barrettine.co.uk
British Pest Control Association	www.bpca.org.uk
*Health and Safety Executive	www.hse.gov.uk
Killgerm Chemicals Ltd	www.killgerm.com
National Pest Technician's Association	www.npta.org.uk

* Free Health and Safety leaflets relevant to pest control can be downloaded from this site.

Qualification Approval:

Centres wishing to offer this qualification should apply to the RSPH Qualifications Department using the Centre Approval Form if not already registered with RSPH as a centre or the Additional Qualification Form if already registered to deliver other qualifications. Both of these forms are available on the RSPH web-site (www.rsph.org.uk).

Recommended prior learning:

There are no recommended prior learning requirements for this qualification. The Society does, however, recommend that candidates have a level of literacy and numeracy equivalent to *Level 1* (but see notes on Special Assessment Needs below)

Special Assessment Needs:

Centres that have candidates with special needs should consult The Society's *Regulations and Guidance for Candidates with Special Assessment Needs,* this is available from RSPH and the RSPH web site (www.rsph.org.uk).

Recommended Qualifications and Experience of Tutors:

The Society would expect that tutors have teaching experience and a qualification in a relevant subject area, but recognises that experienced teachers can often compensate for a lack of initial subject knowledge, or experienced practitioners for a lack of teaching experience. The Society recommends that centres employ a team of tutors with a range of expertise to deliver this qualification.

Suitable qualifications for the Level 2 Award in Pest Management include:

a) Degree or Dip. HE in: Agronomy, Biology, Zoology or related subjects
Environmental Health
or a related discipline that contains modules in pest control
or a degree that contains elements of these specialisms.

b) HNC/D in one of the above.

c) RSPH Level 3 Diploma in Pest Management

d) Advanced Certificate in Pest Control awarded by EMFEC and NPTA
Advanced Diploma in Pest Control awarded by NPTA
BPC Diploma Part II awarded by BPCA

e) NVQ Level 3 in Pest Control.

Centres should be registered with RSPH.

Any enquiries about this qualification should be made to:

The Qualifications Department,
Royal Society for Public Health,
John Snow House
59 Mansell Street
London E1 8AN

Tel. 020 7265 7300
Fax. 020 7265 7301
Email examinations@rsph.org.uk

Appendix: Range of organisms to be studied

The biology, identification and control of the following organisms should be covered during the delivery of this qualification. Some of these species are non-pest species, but should be mentioned due to the possibility of them being mistaken for pests, or of being harmed during control treatments.

Animals which are shown in **bold** type should be considered of greater importance than those shown in normal type, to which only brief reference need be made. Tutors should refer to the British Pest Management Manual for an indication of the depth to which each of the organisms should be studied, but it is important to bear in mind that the relative importance of particular organisms with respect to pest control may change. RSPH Qualifications may update this list if changes in legislation or the importance of a particular organism make this advisable. Tutors will be notified of any amendments to the current species list in advance of any assessment in which any additions to the list may feature.

Mammals

Norway Rat *(Rattus norvegicus)*	
House Mouse *(Mus domesticus)*	
Ship / Black Rat *(Rattus rattus)*	
Grey Squirrel (*Sciurus carolinensis*)	
Fox (*Vulpes vulpes*)	
Rabbit (*Oryctolagus cuniculus*)	
Feral cat (*Felis catus*)	
Mole (*Talpa europaea*)	
Mink (*Mustela vison*)	Questions in relation to control only.
Wood mice (*Apodemus sylvaticus*), yellow necked mice (*Apodemus flavicollis)*, bank vole (*Myodes glareolus)* and field vole (*Microtus agrestis)*	These non-target species should be covered in sufficient detail to allow the pest control technician to distinguish these animals from rodent pests.

Protected species - These should be mentioned with respect to relevant legal requirements

Bats (*Chiroptera*)
Badger (*Meles meles*)
Water vole (*Arvicola terrestris*)
Red squirrel (*Sciurus vulgaris*)
Otter (*Lutra lutra*)

Birds

Gull, Lesser Black-backed (*Larus fuscus*)
Gull, Herring (*Larus argentatus*) These should be mentioned with respect to relevant legal requirements
Pigeon, Feral (*Columba livia*)

All birds should be covered with regard to the requirements of the Wildlife and Countryside Act, 1981 in relation to General (4, 5 &6) and Class (03) licences

Invertebrates

ANTS	
Pharaoh's ant (*Monomorium pharaonis*)	
Common black ant (*Lasius niger*)	
Rogers ant (*Hypoponera punctatissima*)	As an example of a non-trail following ant
Ghost ant (*Tapinoma melanocephalum*)	As examples of ants with multiple Queens
Argentine Ant (*Linepithema humile)*	
BEES AND WASPS	
Social wasps (*Vespidae*)	A representative species should be covered with reference to behaviour and control
Bumble Bees (*Bombus* spp)	
Honey Bees (*Apis mellifera*)	
Solitary Bees	
CRICKETS AND COCKROACHES	
House cricket (*Acheta domesticus*)	
Oriental cockroach (*Blatta orientalis*)	
German cockroach (*Blattella germanica*)	
American cockroach (*Periplanata americana*)	
Australian cockroach (*Periplanata australasiae*)	
Brown-banded cockroach (*Supella longipalpa*)	
ECTOPARASITIC PESTS	
Biting lice (*Mallophaga*)	These should be mentioned with reference to bird

	control
Head louse (*Pediculus capitis*)	Pest controllers should know that these ectoparasites are not treatable by pest controllers and should advise complainants to seek medical help.
Body louse (*Pediculus corporis*)	
Crab louse (*Phthirius pubis*)	
Bed bug (*Cimex lectularius*)	These should be mentioned with reference to identification and their association with house martins, swallows and bats.
Martin bug (*Oeciacus hirudinis*)	
Bat bug	
Cat flea (*Ctenocephalides felis*)	
Ticks	
FLIES	
Blowflies (*Calliphoridae)*	
Fruit fly (*Drosophila* spp)	
Cluster fly	Such as *Pollenia rudis*
House fly (*Musca domestica*)	
Lesser house fly (*Fannia canicularis*)	
Mosquitoes	The life cycle should be covered in relation to control measures
Sewage flies (*Psychoda* spp)	
Phorid flIes (*Phoridae*)	
NUISANCE PESTS	
Silverfish (*Lepisma saccharina*)	This common pest is often indicative of other problems and should be mentioned in relation to these
Firebrat (*Thermobia domestica*)	Although rarer than silverfish this pest is often found in food situations
Harlequin ladybird (*Harmonia axyridis*)	
Booklice (*Psocoptera*)	These should be covered as a group rather than as individual species, they are a significant food pest
Plaster beetles (*Lathridiidae*)	
STORED PRODUCT / TEXTILE BEETLES	
Flour (*Tribolium* spp)**,** grain (*Oryzaephilus surinamensis*)**,** biscuit (*Stegobium paniceum*), Yellow meal work (*Tenebrio molstom* and spider beetles (*Ptinidae)*	These are best considered as a group in relation to their identification and importance as stored product insects
Larder beetle (*Dermestes lardarius*)	*Dermestidae*
Fur beetle (*Attagenus pellio*)	

Varied carpet beetle (*Anthrenus verbasci*)	
Furniture beetle (*Anobium punctatum*)	The features which distinguish this from the biscuit beetle should be mentioned
Grain weevil (*Sitophilus granarius*), Rice weevil (*Sitophilus oryzae*)	The features which distinguish these from each other and from beetles should be mentioned.
STORED PRODUCT / TEXTILE MOTHS	
Warehouse moth (*Ephestia elutella*)	These are a significant stored product insect pest
Indian meal moth (*Plodia interpunctella*)	
Common clothes moth (*Tineola bisselliella*), Case Bearing clothes moth (*Tinea pellionella),* brown house moth (*Hofmannophila pseudospretella*), white-shouldered house moth (*Endrosis sarcitrella)*	These should be covered as a group in the context of fabric pests which can also be a problem with food.
Mites *Acarina*	These should be covered as a group, individual species could be mentioned in the context of newly completed houses and house dust mites with reference to asthma