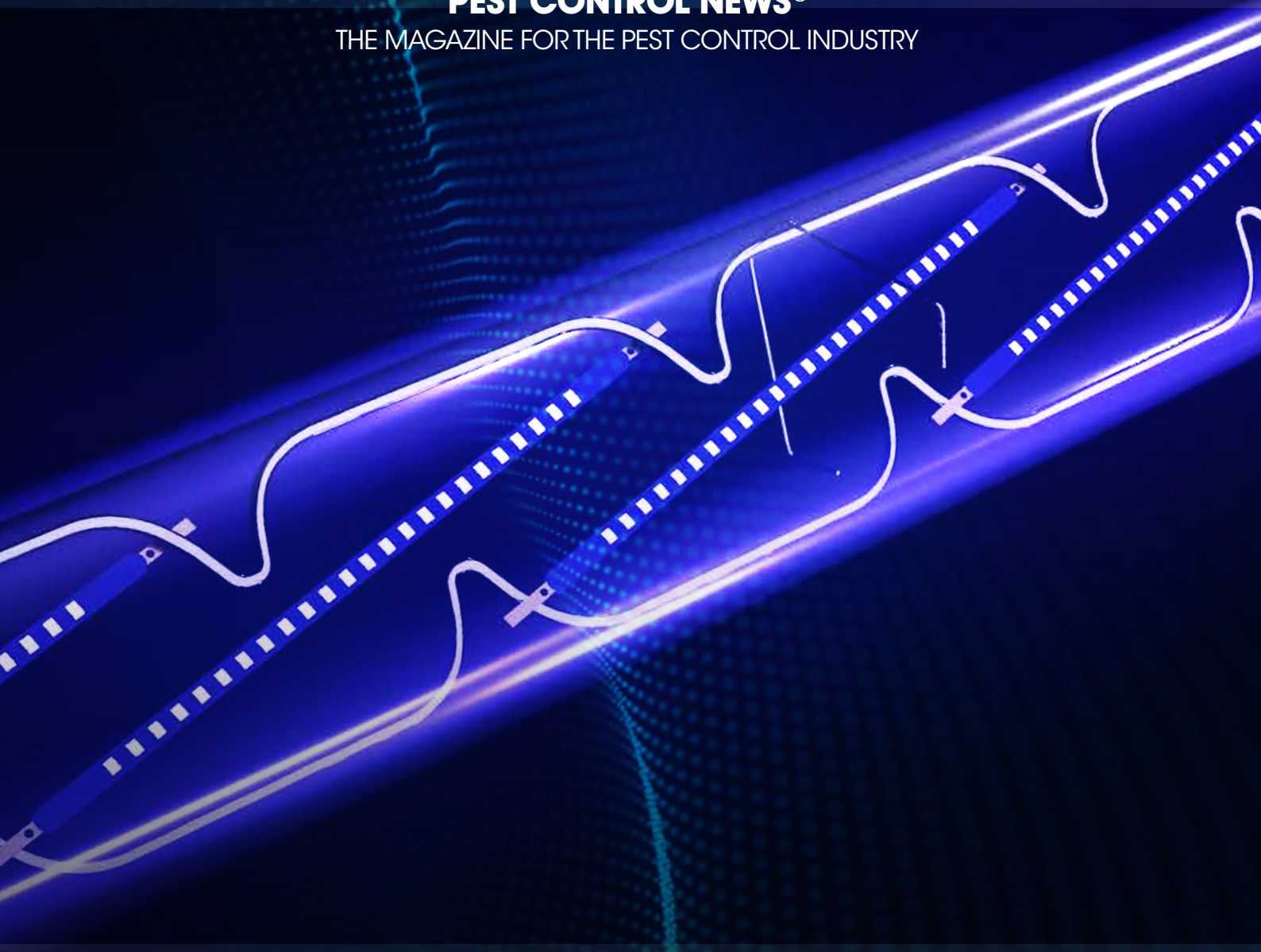
NOVEMBER 2021

PCN

PEST CONTROL NEWS®

THE MAGAZINE FOR THE PEST CONTROL INDUSTRY



issue 128

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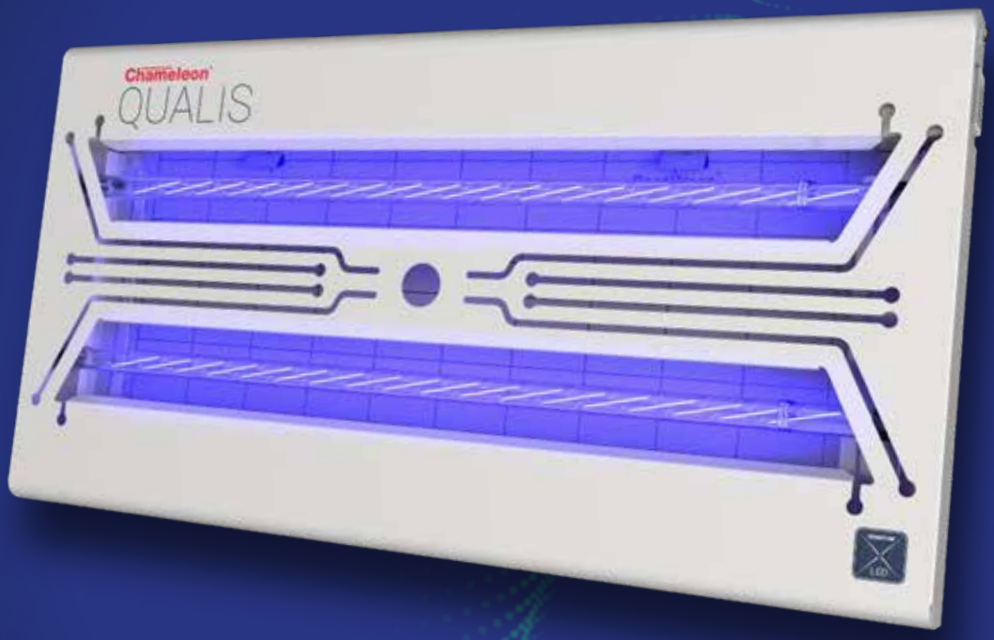

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Confidence in
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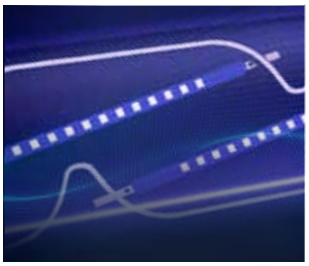

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PestTech returns for 2021! 30

An important date for your diary will be Wednesday 10th November 2021, which is when the NPTA's PestTech 2021 exhibition and conference will take place.

Keep up-to-date with your professional development

All Pest Control News readers can now receive two BASIS PROMPT CPD points per calendar year. All you need to do to claim these points is include PCN on your annual BASIS PROMPT record using the following code:

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Harlequin Ladybird

Billed as the 'most invasive ladybird on the planet' the harlequin ladybird, which also goes by the scientific name of *Harmonia axyridis*, is certainly something that pest controllers need to become familiar with; and fast.

Also known as the Asian multi-coloured ladybird, this invasive species has spread like wildfire since it was introduced into the UK in 2004 and has the potential to jeopardise many of the 46 native ladybird species that we have.

IDENTIFICATION
Enthusiastic ladybird spotters will probably prefer to identify ladybirds based on the colour patterns of their elytra (wing cases) but with 24 different colour forms of *Harmonia axyridis* being shown on the harlequin ladybird survey website, it makes sense to look at other identifying features.

www.pestcontrolnews.com/news

Pest controllers to use facial recognition to catch rats

Rat catchers are going hi-tech, using facial recognition to hunt vermin.

The pest control firm Rentokil Initial has developed a modified form of the identification technology that will allow cameras at infested sites to track individual rodents. That will enable controllers to count numbers at a particular location and catch the creatures one-by-one.

The facial recognition system will be unveiled at the company's innovation hub in Sussex.

Experts came up with the system after discovering that tame and wild rats had different fur colours and skull shapes.

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Date announced for ICUP2022

After the disruption and postponement caused by the Covid-19 pandemic, the organisers of the International Conference on Urban Pests (ICUP) are now delighted to announce the dates of their rescheduled 2020 Conference.

The 2022 Conference is once again to take place at the prestigious Pompeu Fabra University, in Barcelona, Spain from 27 to 29 June 2022.

The 2022 organising team is chaired by Dr Rubén Bueno from Laboratorios Lokímica based in Alicante, Spain. Dr Rubén Bueno explains: "The conference we had planned for 2020 was postponed due to the Covid-19 pandemic. However now that the future is more positive, our Organising Committee is working hard to prepare for what will be another stimulating, productive and above all, Covid-safe conference."

www.pestcontrolnews.com/news

Former Hull City Council pest control officer's hidden Hornby model railway collection fetches £21k

A council worker's hidden model railway collection amassed without his family's knowledge has sold at auction for £21,000.

Covert train toy enthusiast Adrian Batty stashed dozens of rare vintage "gems" in a spare room at his East Yorkshire home.

His wife Jane only found the coveted miniatures after his death last year.

"I knew he collected trains but I didn't quite know how many he had, she said. Full article avaiable at...

https://www.bbc.co.uk/news/uk-england-humber-58668109

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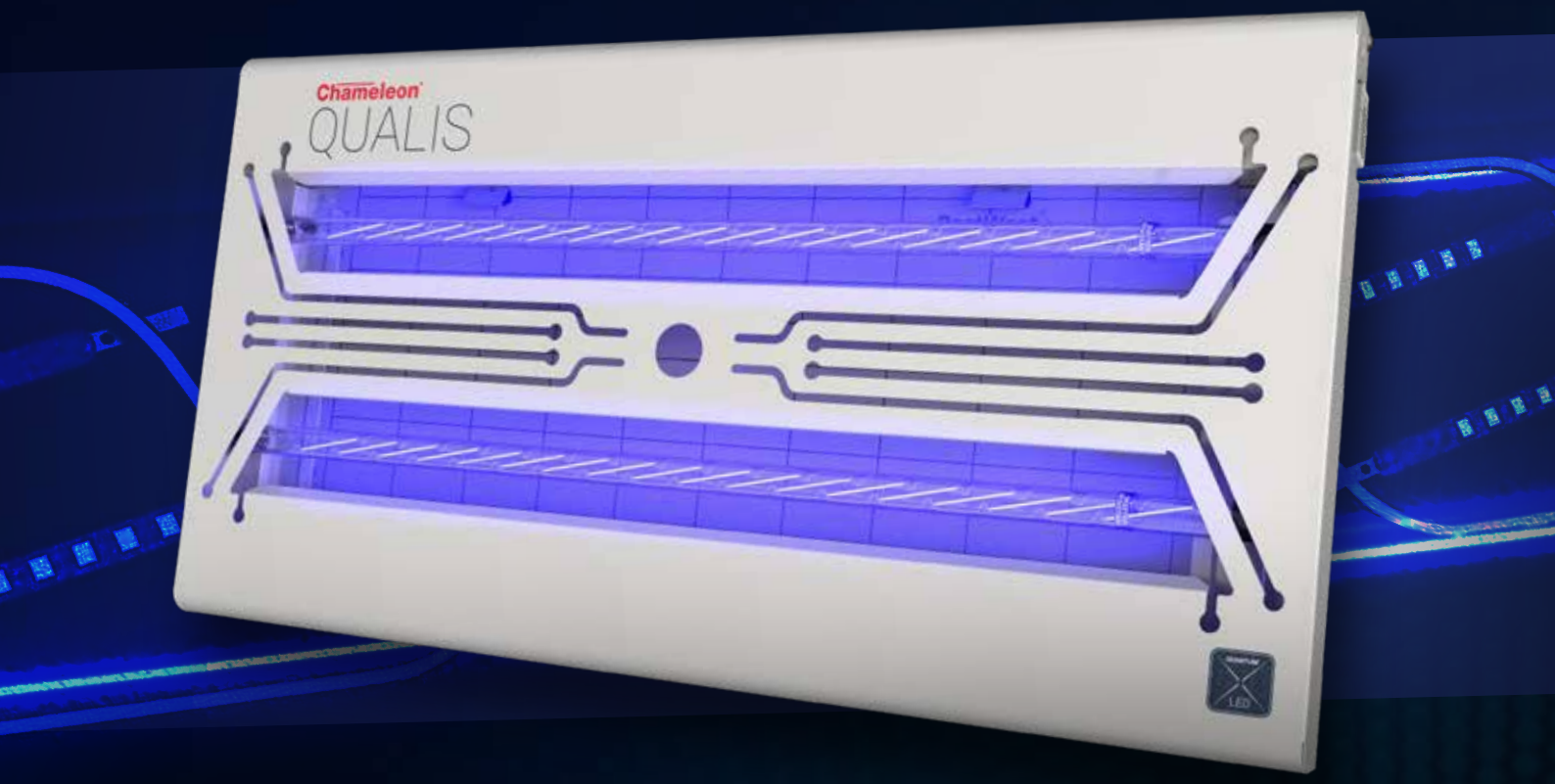

Chameleon® QUALIS

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After years of research and development, PestWest is introducing its latest pioneering innovation and the very first LED fly unit of its kind. Pest Control News interviewed Product Design Engineer from PestWest, Neil McGowan, discussing what the Qualis is all about and how this particular trap will revolutionise the whole industry.

1. Let's start at the beginning. How was the idea of the Qualis born?

The design brief was simple, we needed an LED fly trap that could compete with the performance of traditional fluorescent insect light traps, in terms of attraction and with all the added benefits of LED technology such as increased lifespan and energy savings.

2. The Qualis is PestWest's first LED fly control unit, what are the main differences between this unit and others?

After many years of research and development, it was clear that high power surface mount type UV-A LEDs were not going to be a suitable choice for PestWest's flagship LED model. Whilst surface mount LEDs had become cost effective and provide a good level of UV-A output with an acceptable lifetime, the high intensity of light from such a small point source was having a negative effect on flying insect attraction.

The Quantum X LED lamps in the Qualis utilise filament LED technology, which contain a much larger number of lower power UV-A LEDs to create a more even spread of light distribution over the length of the lamp, whilst retaining the same overall UV-A output. Filament technology also emits light in all directions, meaning that as well as light shining out of the trap into the room, it also shines back towards the glue board and illuminates the traps interior. This light distribution has been shown to provide improved insect attraction over traditional high power surface mount LEDs which only emit light in a narrow beam (typically 120°). As the point source of a traditional surface mount LED is so concentrated, it can appear dazzling, whereas filament LEDs produce a much softer glow, which independent fly tests have shown to be more attractive to flies.

Another unique feature of Quantum X LED technology is that the LEDs are cooled by Helium gas which efficiently transfers the heat from the LED to the outer glass tube where it is evenly dissipated along its entire length and circumference. Traditional high power surface mount UV-A LEDs require the use of large aluminium heat sinks, which add cost and complexity to the design.

The enhanced characteristics of the Quantum X LED lamps allow them to be ran at a slightly lower power level than high power surface mount LEDs, without compromising on results, meaning that the Qualis consumes even less power than many other LED traps on the market.

3. **How do you see Pest Control Companies and end-users benefit from these?**

The benefits to Pest Control Companies are that they can offer their customers an LED fly trap with a comparable performance to a traditional fluorescent fly trap, with a huge reduction in power consumption. A Qualis fitted with two Quantum X LED lamps uses only a third of the power consumed by a traditional 30W fluorescent fly trap. Not only are the energy savings good for the customer, but they are also good for the environment. The other environmental benefit of the Quantum X lamps is that they are mercury free.

Pest Control Companies can also save time and money due to the longer service interval of the Quantum X LED lamps which is now three years, compared to annual lamp changes with fluorescent lamps.

4. **Wow, 3 years is quite a longevity for the lamps compared to normally 1 year! Could you tell us a bit more about the process of developing the Qualis? And what has been the biggest challenge throughout the development?**

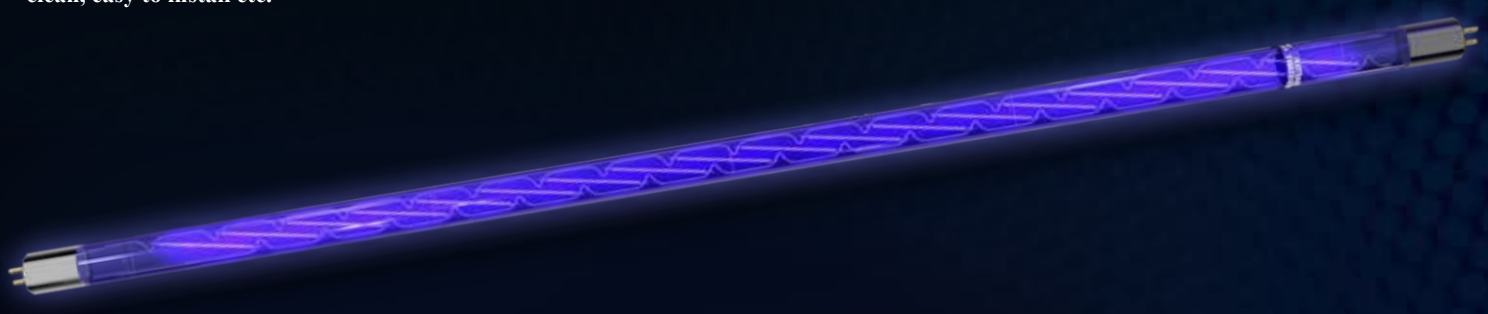
Once we had decided to disregard high power surface mount UV-A LEDs, the focus switched to filament LED technology which could be packaged into a T5 21" tube. This allowed the design team at PestWest to develop an ultra slim trap with all the usual benefits that you would expect from a PestWest product, easy to service and clean, easy to install etc.

There were two main challenges when developing the Chameleon Qualis. The first was selecting the correct type of filament LED in terms of wavelength, substrate material and then finding the right balance of performance in terms of insect attraction versus lifetime. The second challenge was optimising the glue board technology to unlock the true performance of the trap. These challenges were time consuming with many hours, days, months and years of testing to fine tune the product to a level of performance we were happy to have PestWest's name on.

5. **Where do you see the industry going over the next 5 years in terms of LED units? Are there more to come?**

The Chameleon Qualis with Quantum X filament LED technology has already made a giant leap over traditional fluorescent technology whilst also outperforming the current competition fitted high power surface mount UV-A LEDs.

UV-A LED light output levels and efficiency will continue to improve into the future. The cost of producing these LEDs will also fall over time as the industry begins to shift towards this new and exciting technology.



Consultation on NRW's approach to regulating the shooting and trapping of wild birds in Wales

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Natural Resources Wales have opened a consultation on bird licences. Of particular interest is the approach to regulating the shooting and trapping of wild birds in Wales. There is still time to contribute! The closing date is 11th November. Read on for details of how to contribute to this important consultation.

Closes 11 Nov 2021 - Opened 19 Aug 2021

Contact 0300 065 3000

Wildbird.Review@cyfoethnaturiolcymru.gov.uk

Overview

All wild birds in Wales have legal protection. Natural Resources Wales (NRW) has a number of powers under which we can authorise others to kill or take particular species of wild birds, eggs and nests for certain purposes, for example in order to prevent serious damage to crops, livestock or fisheries, to protect public health or safety or to conserve other species of wildlife.

We are undertaking a review of how we exercise these powers.

This review is looking at the different types of permissions that we offer and the processes used to deliver these activities to seek to make improvements.

Why are we consulting?

We want to hear your views on our proposals.

The findings of the consultation will help shape our future approach to the permissions we give for shooting and trapping wild birds in Wales and the destruction of their eggs and nests.

What are we consulting on?

This consultation seeks your views on proposals for NRW's approach to regulating the shooting and trapping of wild birds in Wales and the destruction of eggs and nests. The details of our proposals are contained in a consultation document. Links to the consultation document and a number of other relevant documents are given below.

Please read the information in the consultation document before responding.

How to respond

Please submit your consultation response using the online survey. Start by accessing the link below which will take you to the consultation questions. From each set of questions you will be able to access the consultation document.

https://ymgynghori.cyfoethnaturiol.cymru/evidence-policy-and-permitting-tystiolaeth-polisi-a-thrwyddedu/nrw-s-approach-to-regulating-the-shooting-and-trap/

If you are unable to respond online please email us at Wildbird.Review@cyfoethnaturiolcymru.gov.uk or write to Wild Bird Review Consultation, Natural Resources Wales, Maes y Ffynnon, Bangor LL57 2DW.

What we do now: Licences granted under section 16(1) of the Wildlife and Countryside Act 1981

NRW currently grants two types of licences under section 16(1) of the Wildlife and Countryside Act 1981 (the Act), allowing the killing or taking of wild birds and/or destruction of eggs and nests: specific licences and general licences.

Specific licences require individuals to apply to NRW using one of our application forms. The application must identify the individuals seeking authorisation, the purpose of the action (which must correspond to one of the purposes listed in section 16(1)), the species concerned and what, if any, efforts have been made to address the problem or meet the need using alternatives to lethal means. Specific licences identify the named individuals who may use the licence, the species of wild birds which may be killed or taken, by what method(s), for what purpose, when and in which location(s).

General licences are granted to all "authorised persons" in Wales and do not require applications to be submitted. "Authorised person" is defined as including any landowner or occupier in Wales, any person acting on their behalf, and a number of other categories of person including individuals authorised in writing by NRW or by local authorities.

We currently have four general licences authorising lethal control of wild birds:

- General Licence 001 (GL001), which authorises the control of six species of wild bird (carrion crow, jackdaw, magpie, feral pigeon, woodpigeon, Canada goose) for the purpose of preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables or fruit or to prevent the spread of disease to livestock, foodstuffs for livestock, crops, vegetables or fruit;
- General Licence 002 (GL002) which authorises the control of feral pigeon for the purpose of preserving public health and preventing the spread of disease;
- General Licence 004 (GL004) which authorises the control of four species of wild bird (carrion crow, jackdaw, jay, magpie) for the purpose of conserving wild birds;
- General Licence 005 (GL005) which authorises the control of ruddy duck for the purpose of conserving fauna or flora.

NRW's general licences are granted annually from 1 January to 31 December each year and are published on the NRW website. Application forms for specific licences and related guidance is also published on the website.

Our approach to carrying out the review

We are reviewing our approach to the permissions we give for the shooting and trapping of wild birds in Wales and the destruction of their nests and eggs.

This is a broad review, which builds on the earlier work we carried out in 2019 which resulted in some significant changes to some of our general licences, including reducing the number of species which may be controlled under the licences and changing the conditions relating to use of the licences within statutory protected sites in Wales. The 2019 changes were an interim measure.

The review is being carried out by staff within NRW, but an important element has been to gather evidence and test our developing ideas and proposals with a wide range of external stakeholders. We carried out a call for evidence between December 2020 and January 2021. We have also taken account of the approaches to wild bird control licensing in other parts of the UK, met regularly with other UK licensing authorities and with Welsh Government.

Legal challenge against NRW general licences

During the course of this review, three general licences (GL001, GL002 and GL004) which we had issued in 2020, being identical general licences to those we had previously issued in October 2019, were subject to a legal challenge alleging that in granting the licences NRW had failed to comply with a number of statutory requirements.

The three grounds of challenge were that NRW had:

- failed to specify the circumstances in which the licences may be used;
- failed to establish that there were no other satisfactory solutions as regard the purposes for which the licences were granted;
- taken an improper approach to considering the evidence base when deciding to allow derogations from the statutory protection of wild birds.

The legal challenge failed on all three grounds and the licences were declared lawful in the High Court in January 2021. In light of that outcome, we have not made any changes to the licences concerned and they remain in place until they expire on 31 December 2021.

New spin out company from the London School of Hygiene & Tropical Medicine created to transform the global health landscape

Two innovative spin outs from the London School of Hygiene & Tropical Medicine join forces to create Arctech Innovation, a world-leading company with game-changing public health technologies

The technology-driven spin-out from the London School of Hygiene & Tropical Medicine (LSHTM), Vecotech, has acquired fellow LSHTM spin-out ARCTEC, to form an exciting new entity called Arctech Innovation.

Bringing together the Arthropod Control Product Test Centre (ARCTEC) and Vecotech, Arctech Innovation will be a world-leading innovation centre for breakthrough research, evaluation and commercialisation of new, game-changing products for the surveillance, diagnosis, and control of diseases.

ARCTEC is a world-renowned centre of excellence in entomology and vector control connecting the academic expertise at LSHTM with the needs of the industry, while Vecotech turns scientific discoveries into novel technologies to monitor and control insect pests and protect people living in disease-endemic countries.

The move will enable the growth of Vecotech's existing innovation platform, which exploits the powerful odour detection capabilities of insects to develop disruptive public health products, including novel odour-based diagnostics for diseases such as malaria and COVID-19, as well as products aimed at controlling vector insects.

Building on ARCTEC and Vecotech's outstanding reputations for their unrivalled vector control expertise, high-quality scientific rigour and clinical trial expertise amongst their portfolios of clients and partners, Arctech Innovation also intends to expand its unique product evaluation and clinical capabilities and services.

Arctech Innovation will be led by its CEO and co-founder, Professor James Logan, a Professor at LSHTM and a world-leading expert on disease control with more than 20 years of experience developing, implementing and commercialising novel technologies to detect and control diseases.

Professor Logan, said: "Arctech Innovation has big ambitions to change the way we detect and control some of the world's deadliest diseases, and our unique set of in-house capabilities and expertise gives us the perfect platform to develop disruptive public health solutions."

Arctech Innovation has a mission to transform lives by creating and delivering public health innovation and global social impact. It will comprise three core divisions:

Innovation: translating academic scientific discoveries and novel IP into commercial products using its proprietary Semeion IQ™ chemical ecology platform.

- Contract research: offering clinical trial and product evaluation services to key strategic partners, from experimental testing to large-scale field and clinical trials, to enable product development and product registration.
- Social impact: delivering educational, training and behaviour change projects which have a positive impact on the health and wellbeing of individuals and communities around the world.

Earlier this year, Arctech Innovation, then trading as Vecotech, successfully launched its first commercial product, BugScentsTM, a novel bed bug pheromone-based lure which is selling well.

Through its close affiliation with LSHTM, as well as other academic and commercial partners, Arctech Innovation has a growing pipeline of innovative and life-changing odour-based disease surveillance and control technologies to bring to market.

Professor Mary Cameron, director and co-founder of Arctech Innovation, says: "I couldn't be more excited about bringing together two world-leading organisations in disease and vector control research and public health innovation, and leveraging the unrivalled expertise of each company to bring greater value and drive forward the development of life-changing public health technologies."

Professor James Logan added: "With this move we will accelerate the development of several life-saving technologies, and social impact projects, to improve health and wellbeing of people around the world, which is at the forefront of our mission at Arctech Innovation."

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Kness Supports Women and Brings Awareness For Breast Cancer With Pink Snap-E Traps

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Albia, IA (September 29, 2021) – Kness Pest Defense has created one-of-a-kind pink Snap-E Mousetraps in an effort to raise awareness for breast cancer and support women in the pest control industry. These unique mousetraps will be distributed first during the Women in Pest Control conference in Houston, Texas, Sept. 30-Oct. 1, 2021.

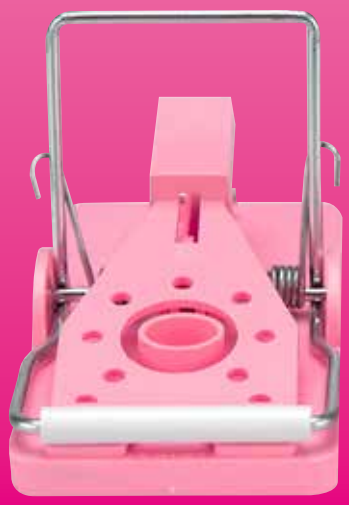
"With October being Breast Cancer Awareness month, we wanted to bring attention to this important health issue that affects people all over the world and in our industry," said Dan Crew, General Manager of Kness Pest Defense. **"Giving back to our community is engrained into our company culture. We are proud to support women in the industry and others in any way we can."**

Kness is a silver sponsor for the 2nd Annual Women In Pest Control Conference and will have a booth at the event. The conference features speakers, educational presentations, and exhibitors – all women. The company celebrates females in pest control and fully supports the conference's mission of highlighting women in the industry.

The company has produced nearly 450 pink Snap-E Mousetraps to date and will give them away at the Women In Pest Control Conference, PestWorld, and other trade shows throughout October.

Along with supporting women and breast cancer awareness, the pink traps also demonstrate that the company is capable of producing a wide range of custom-colored pest traps. This coloring process is a service that can be done as a special request of customers. Kness continues to push the envelope with its products, and a pink Snap-E trap is just one iteration of that innovative spirit that's a core principle of the company.

Those interested in learning more about Kness Pest Defense products and solutions are encouraged to visit the company's official website at Kness.com or by following them on social media, including Facebook, Twitter, and Instagram.



Selontra wins Best Product in Pest magazine awards

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Selontra, the revolutionary new rodenticide bait from, BASF, has been awarded as the Best Product by Pest magazine.

The prestigious awards recognise the products that enhance the working lives and practices of pest professionals. Eligible products must have been launched between January 2020 and August 2021 and are nominated by readers.

Helen Ainsworth, BASF pest control specialist, said: "We're thrilled that Selontra has received this award – it's a fantastic accolade and great recognition from such a leading industry name. It is a pioneering product that we are immensely proud of and being nominated by readers and pest controllers makes the win even more special! In such a short space of time since launching, Selontra has already proven to be incredibly popular, with pest controllers across the country seeing first-hand just how effective it is."

The award bolsters BASF's continued dedication to responsible pest management, working with pest control operators (PCOs) across the country to highlight the importance of effective and responsible pest management and providing them with the most appropriate solutions to complete the tasks at hand.

An industry-leading rodenticide bait, Selontra offers a unique solution which takes control of infestations within as few as seven days, thanks to its high performance, highly palatable, and non-anticoagulant formulation.

Selontra is neither persistent in the environment or bio-accumulative; while controlling resistant rodents and can also withstand extreme climates, providing pest controllers with an effective yet safe treatment.

For more information about BASF and Selontra, visit www.pestcontrol.basf.co.uk/en

Identifying Booklice

in Scottish Galleries, Libraries, Archives & Museums

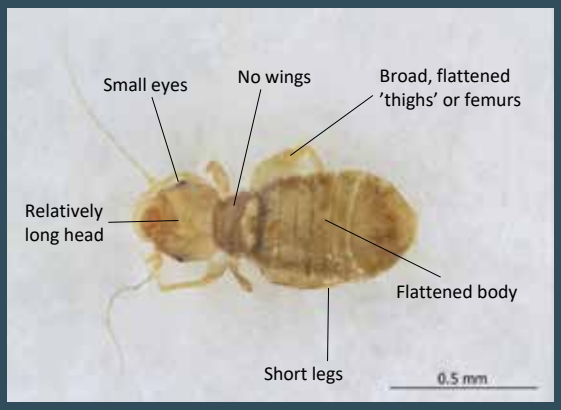
Jeanne Robinson[1], Joseph C. Jackson[2] & Ashleigh L. Whiffin[2]

Booklice (Psocids) are all too frequently encountered in GLAM, but identification to species level can often be overlooked, after all there's no such thing as a good booklouse when it comes to collections care, so why bother?

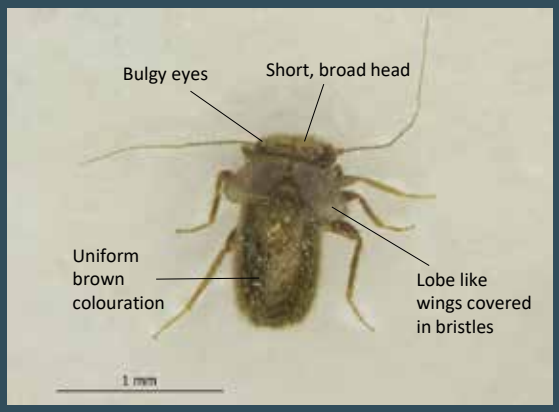
Booklice can provide an indicator that IPM is failing in a particular area. By monitoring any booklice on your blunder traps and identifying the specific species present on your site, you will be able to recognise any new invasions, and respond accordingly.

This simple identification aid is here to help you recognise the **5 species** currently known from Scotland.

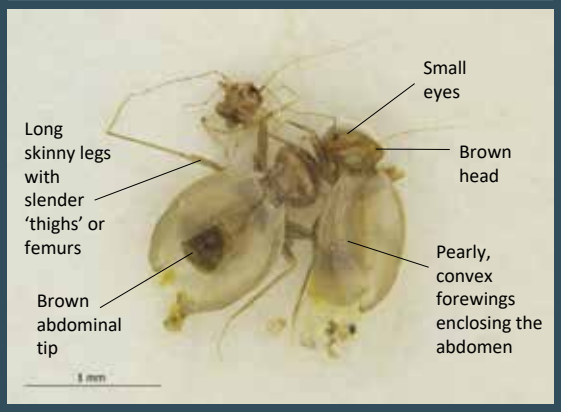
Liposcelis bostrycophilia



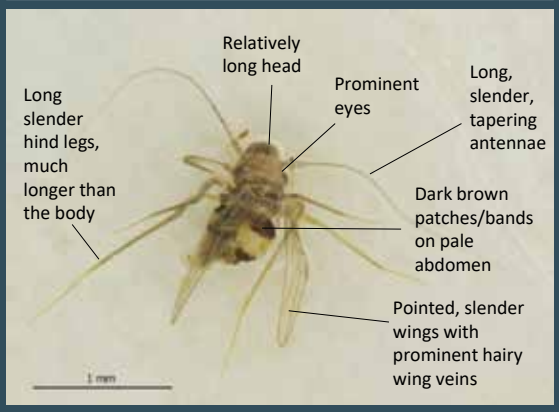
Lepinotus reticulatus



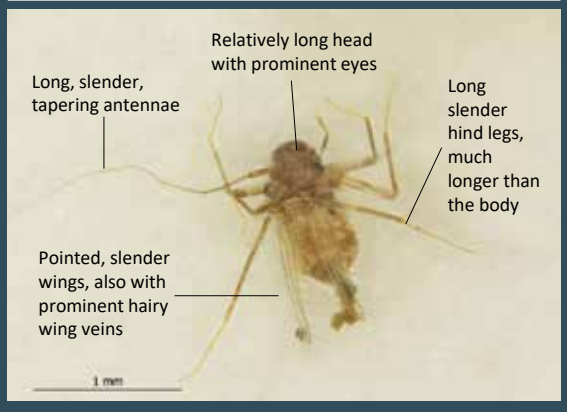
Badonnelia titei



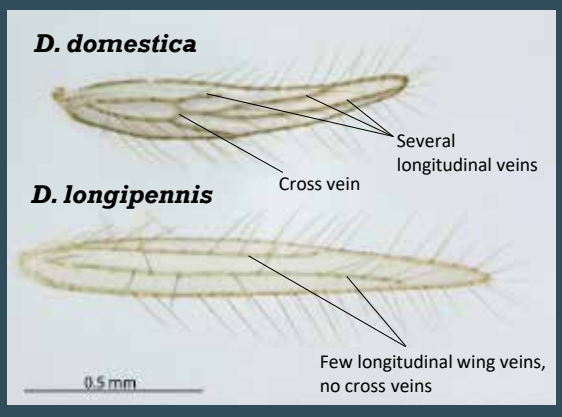
Dorypteryx domestica



Dorypteryx longipennis



The wings are the key to separating the 2 species of *Dorypteryx*…



RECORDING YOUR BOOKLICE:

If you need further assistance identifying your booklice, we'd be happy to take at look at your sticky traps – just get in touch!

To help map the distribution of these species we strongly encourage you to submit your booklice records of via the '**What's Eating Your Collection**' website.

https://www.whatseatingyourcollection.com/

jeanne.robinson@glasgow.ac.uk

1 THE HUNTERIAN

2 National Museums Scotland

1 University of Glasgow

Dramatic drop in allegations of rogue rodenticide supply, however…

Watertight point-of-sale controls? Or loss of interest among tip-off sources?

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In the past year, only one suspected point-of-sale non-compliance case has been reported to the Campaign for Responsible Rodenticide Use. There were 62 such alerts in the three years to November 2020.

What cannot be determined, explains CRRU chairman Dr Alan Buckle, is whether this "dramatically lower occurrence is because the stewardship regime's point-of-sale processes are now watertight, or the sector's concerned sources have lost interest.

"Clearly, it is critical for the regime's success that rodenticides don't get into unqualified hands," Dr Buckle adds. "In case loss of interest does apply, I urge all responsible individuals – whether in pest control, farming or gamekeeping – to maintain their vigilance and help stamp out illegal supply."

The notification of failure to comply with either mandatory point-of-sale checks or broader requirements of the UK Rodenticide Stewardship Regime can be made via an on-line tool at thinkwildlife.org/stewardship-regime/report-a-concern/.

Of the past three years' 62 alerts, 59 were unique cases. The other three were replicas of an existing allegation from a different source. Among the 59, there were 54 about internet sales, of which 27 resulted in the listing being removed, and one instance of the website being taken down. Six more involved clearer description to become compliant, and another six were apparently illegal sales of rodenticide, then reported by CRRU to HSE. There were 11 (19%) not upheld and a remainder of miscellaneous one-offs.

Alerts with sufficient information to merit investigation are passed by CRRU to the company(ies) whose products are alleged to be involved. They investigate, take appropriate action and report the outcome to CRRU. The source of each alert remains anonymous throughout.

The importance of point-of-sale control cannot be over emphasized, according to Alan Buckle. "For rodenticide stewardship to be judged effective by the regime's HSE-led government oversight group, lasting reductions in rodenticide residues carried by non-target wildlife are expected," he says.

"Without such evidence, we might anticipate further restrictions on how rodenticides can be used, and by whom. Clearly, responsibility is squarely in users' own hands."

Move to ban glue boards in Wales

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Glue boards in Wales could be banned and the Welsh government intends for this to happen, according to a recent announcement. This may of course impact on the use of rodent glue boards by professional pest control operators.

Previously, the Welsh Government had mooted plans to ban snares. It is perhaps no surprise that they have now pledged to make this happen for glue boards.

A recent RSPCA Cymru campaign 'LawsForPaws' had an influential role in bringing proposals to government. Animal owners throughout Wales emailed, in their thousands, members of the Senedd. A major 'animal-friendly' proposal, backed by the RSPCA, was a Glue Trap Offences (Wales) Bill.

The response of the Welsh Government was to confirm it supports the bill.

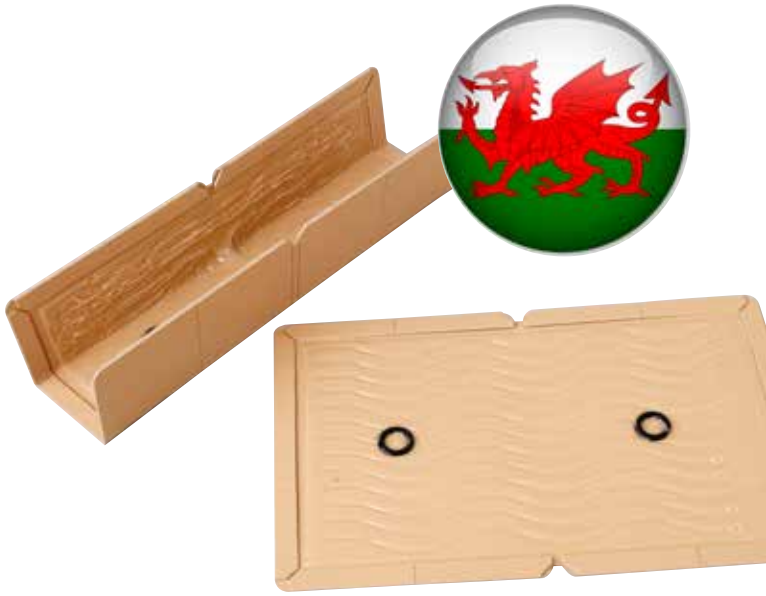
RSPCA spokesman, David Bowles (head of public affairs), commented "These traps can cause immense pain and suffering to animals, and should have no place in modern Wales. So we're absolutely delighted that the Welsh Government has now announced plans to outlaw glue traps once and for all, as it outlines its next steps linked to the landmark Agriculture (Wales) Bill."

Public opposition has increased steadily, regarding the application of rodent glue boards, in recent times. A Bill to ban the application of rodent glue boards, for public health pest control purposes, has been backed by the English government. This will make the future use of them difficult to back.

A June press release by the government said:

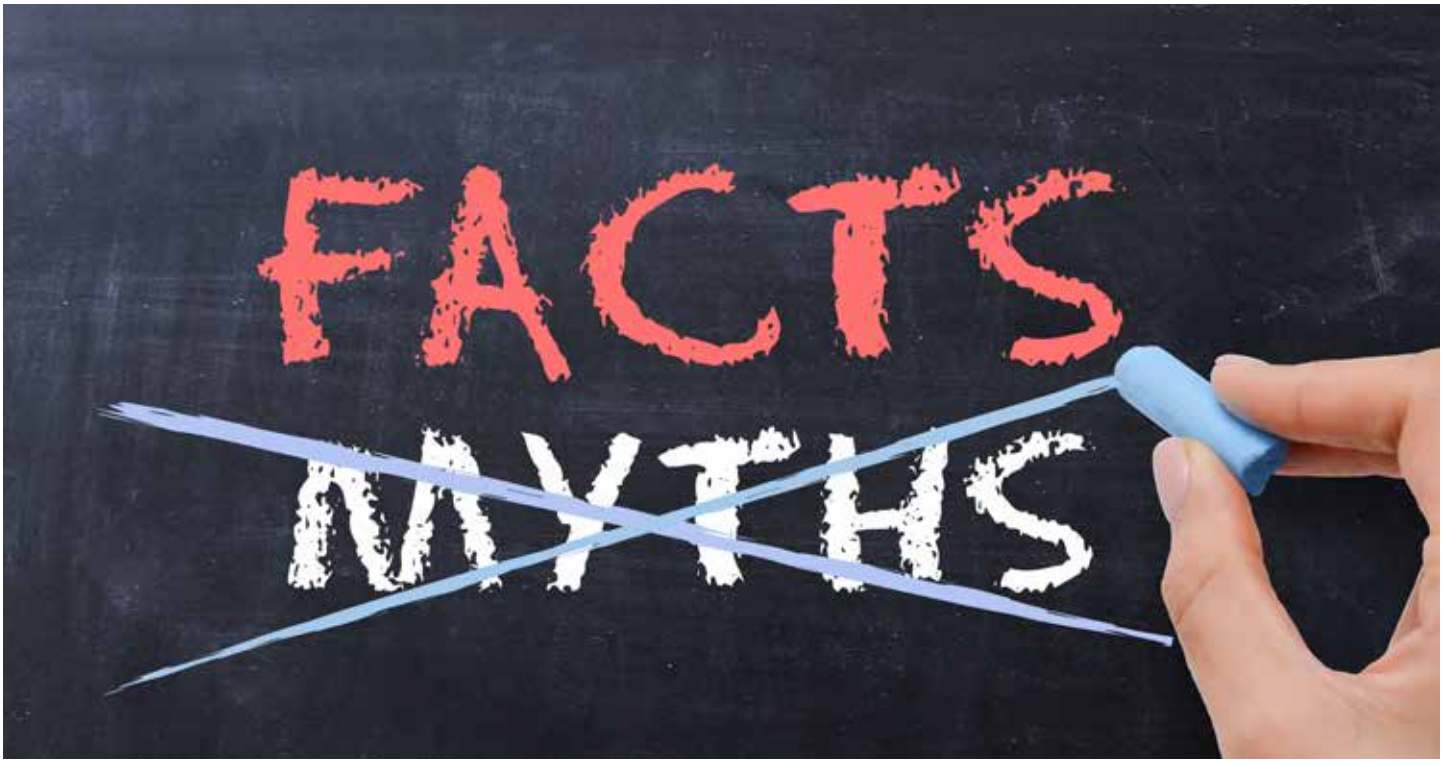
"The new Bill will enable a full ban on the use of glue traps to catch rodents.

The UK has a strong history of leading the way on animal welfare and now that we have left the EU, the Government is committed to improving these standards even further by delivering a series of ambitious reforms, outlined in the Action Plan for Animal Welfare".



What is the pest control industry doing to protect the use of rodent glue boards?

- The Pest Management Alliance (PMA) is working hard to preserve the use of rodent glue boards by trained professional pest controllers
- The PMA, comprising the BPCA, NPTA and CIEH, have a key role in stewardship of rodent glue boards
- Government is being lobbied to consider the continued use of glue boards for pest management professionals
- The NPTA, in consultation with the BPCA through the PMA, have been asking members to state their opinion on the proposed bill. They have held consultation meetings and launched a member poll to ascertain members viewpoints.
- The BPCA have run a 'Save Professional Glue Boards' survey and talked to members and lobbyists
- The PMA 'code of best practice – humane use of rodent glue boards' is to be followed by all professional pest controllers
- Best practice in the humane use of rodent glue boards is featured in relevant training courses for the industry



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Pest control myths debunked

Social media has a lot to answer for. Mainly general public misconceptions around pest control and pests that, when viewed by a pest controller, seem utterly bizarre and leaves us questioning where did this incorrect information come from? Do people actually believe this? A friend of a friend usually had it happen to them or they know someone that knew someone... Already we are facing skewed information passed from one person to another and so on.

Recently reading through some random and initially unrelated skin care groups (we all live and breathe pest control but need a break on occasion!) a conversation about an unknown skin rash was stumbled across. The question was raised…had the person had a new carpet? If so, a friend of a friend had 'bugs' jumping off her brand-new carpet, stinging and biting her, giving her a rash. Declining to comment for fear of stirring a hornet's nest, this did trigger a thought process as to where misinformation comes from and how best to dig out some facts.

Bugs - you say?

Let's start with the bugs, although they're not really bugs are they. Being a technical minded individual, a bug is a true bug, i.e. a hemipteran. These are a very specific order of insects, only a very small number of which actually fall within the realms of 'pest' species. Accepting a very loose definition of some sort of insect, lets move on to the brand-new carpet. Its pretty rare to get anything at all living in brand new carpet. Even the textile pests tend to prefer something a little more aged and easier to chow down on.

Plus, a new carpet, even if it is wool or wool blend would likely not make it out of the factory if infested.

The unidentified skin rash

Rashes or other skin reactions, from biting or stinging things, are a little more challenging because there is physical proof of this - a visible rash. In theory it would be perfectly possible to get a rash from a new carpet, but it's not likely that there were 'bugs'; perhaps a better description would be the 'cable bug' coined from our American counterparts. Not a bug at all (ironic don't you think?) but easily mistaken for fleas or any other biting insect. Cable bug refers to statically charged particles or fibres, which when statically charged are the opposite polarity to items around them, including humans. The opposite polarities attract and before you know it tiny fibres are attached to the skin, causing an irritation and guess what…a rash. (Definitely more fibres with a new carpet, as the extra fluff can last weeks despite vacuuming frequently). Also encourage medical advice is sought by the affected individual. There may also be a lesser-known problem. If nothing has been found on monitors but carpet beetle, or more importantly their larvae (the infamous woolly bear), are present then a skin rash could occur after contact. This is because woolly bear larvae possess urticating setae (irritating hairs) all over them.

Its illegal to treat with insecticide

Without any physical pest evidence, at the location of the reported 'bugs', we cannot legally treat with an insecticide. We can recommend that the humidity is increased, the carpet has an anti-static treatment or is wet cleaned. The anti-static or the wet clean will only work for so long, as the issue may return when the static charge has built up once again (from foot fall and potentially from cables, computers, shredders, printers, screens, the list goes on). Anti-static mats may be appropriate but refer to manufacturers advice.

Old myths

Never step on a cockroach – it will burst with, "babies", and make the issue much worse! This has to be one of the favourites, an oldie but a goodie. Nope not at all true, unless you step on a German cockroach female (*Blattella germanica*) which is literally several hours away from dropping her ootheca. Then, there might be a remote possibility that the nymphs are developed enough to survive a premature birth. There are much more efficient ways to treat cockroaches than stepping on them! There are some cockroach truths, a cockroach could survive without its head for up to a week (eventually dying of starvation and dehydration) and would also survive a nuclear bomb blast. Again, in theory, this is a truth. They could not survive signification heat of the initial explosion and would be obliterated along with every thing else. But cockroaches have a particularly slow cell turnover, therefore mutations (whatever cause) take longer to have an effect, meaning cockroaches can survive significantly higher levels of radiation for much longer than humans.

Bedbugs are tiny – recent studies have found that people born after the 1950's/60's are less likely to know what a bedbug actually looks like and assume it is tiny. The confusion possibly arises because of dust mites, which are tiny and frequently present in the home. When explaining the true size and possible extent of bedbugs, they are both horrified and mystified at the same time. The theory is that folk-knowledge has decreased over time, and you would probably not say to the kids of today 'sleep tight don't let the bedbugs bite'. This may give the child ultimate fear that they are going to be consumed by a huge bug in their sleep – cue everlasting nightmares and sleepless nights.

In summary

Social media has many benefits with the increasing access to information (a good thing for the most part, but not if its misinformation or incorrect information). How are the general public to know, they simply can't unless they seek advice from a professional, and isn't this always the case? Not just for pest control. Check the source of the information and get help or advice from a professional. Hearsay is not necessarily truth and neither is the friend of a friend of a friend that had it happen to them. Finally, don't believe everything you read on the web.

Calibrate the dosing per spoon for each bait used and write on the stick as a quick reminder

Rat runs targeted by burrow baiting

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Rodenticide baiting still forms an essential component of today's 'integrated rat management' programmes. While the emphasis is on environmental and physical controls, such as proofing and elimination of food sources, when rodenticides are required, then burrow baiting with Talon Pellets is typically the preferred technique, advocates Daniel Lightfoot of Syngenta.

Burrow baiting, where bait is applied directly into brown rat burrows, has two key advantages over baiting in boxes:

- Avoiding rats' natural neophobia – if boxes are placed in their territory, it will take several days before they enter them, if they enter them at all. Burrow baiting avoids this neophobic reaction; the rats will usually readily consume bait placed in their burrow. So it is often possible to achieve faster control using burrow baiting.
- Bait placed into burrows is less accessible to non-targets than bait placed into bait boxes, so there is reduced risk of non-target poisoning.

Before implementing a rat control programme, carry out a thorough site survey to determine rat living and feeding areas along with the routes of travel between. This will help decide on the appropriate control techniques for the site and where to place them.

An environmental risk assessment also needs to be completed, as required by CRRU (Campaign for Responsible Rodenticide Use). This is a statutory requirement, as adherence to the CRRU Code is now incorporated into label instructions. Ensure written records of the survey and the assessment are kept. These will help to follow the course of the control activities and demonstrate legal compliance.

Identifying active rat burrows

Burrows can be made directly down into a horizontal soil surface, but they are often made into banks or under paving slabs, sheds, debris or tree roots. Rat burrows have entrances of 6 to 9cm diameter, with spoil fanning out from them.

If there is no spoil, then it is likely that the tunnel was made outwards from a drain or sewer pipe. This would need to be checked carefully as it is important not to contaminate sewage or wastewater.

Ensure any burrows you are planning to treat are actually rat burrows, rather than being home to any non-target animals. For example, burrows of the highly-protected water vole can resemble rat burrows. The key differences are:

- Entrance hole size: water vole entrance holes are usually smaller in diameter than rat burrows (range 4 to 8cm)
- Vegetation around vole burrows is generally well-nibbled.

Note that water vole burrows are typically always found within three meters of running water, so if the burrow is a long way from water then it is more likely to be a rat burrow.

Prior to baiting any burrows, ensure they are active. Established active burrows will normally have at least one well-worn run extending from them. If the burrow is disused, then vegetation might have started growing over the run and there might be cobwebs or plant material in the burrow entrance. Note that rat burrows can have multiple entrances.

Bait selection

Bait placed in burrows can sometimes be ejected by the rats. For this reason, the formulation of bait used for burrow baiting needs to be selected carefully. A variety of formulations are approved for use in burrows, but some might be a better option than others.

For example, if blocks are used then whole blocks could be ejected. Whilst the blocks could be secured on a wire to help prevent them from being carried off whole, if they are left exposed on the soil surface then they are accessible for non-target animals to eat in situ.

Using loose grain or pellet bait overcomes this problem, since less of it is likely to be ejected. The bait is best not placed into polythene bags as this puts an unnecessary barrier, albeit a very thin one, between the rats and the food.

In addition, the bags are more likely to be ejected due to them blocking the tunnel and being non-natural, and if they are ejected the extra quantity of bait in them means a bigger non-target hazard than loose bait.

All formulations will last several days in appetising condition for rats, even in a burrow with a high level of humidity. And as bait take in a burrow is likely to be relatively quick then longer-lasting moisture-resistant baits, such as wax blocks, are less desirable.

Loose grain or pellet baits are normally left in a burrow on completion of treatment, so it is best if they deteriorate and become unpalatable fairly quickly, so that they are not attractive to any other animals that might enter the burrow after the rats have died. The large surface area of these favoured finer formulations assists the breakdown process.

In order to minimise potential for non-target harm, as well as comply with COSHH, then the least toxic suitable product should be selected. So, in areas where there is no known or suspected resistance to any of the multi-feed anticoagulants, then these will need to be used.

However, where there is resistance, then products containing single-feed active ingredients will be needed. Talon Pellets are an ideal formulation for burrow baiting; it's is highly palatable to rodents and contains the 'single-feed' active ingredient brodifacoum, making it an extremely effective product for burrow baiting. There is currently no known resistance to brodifacoum.

Check the label restrictions of the baits you intend to use for burrow baiting. Some can only be used 'in and around buildings' i.e. where the rats are actually entering buildings. If the rats are not physically entering buildings, then only baits approved for use in 'open areas' can be used.

Accurate application

Ensure anybody in the vicinity is warned about the rodenticide treatment.

The quantity of bait applied to each hole will depend on the number of burrow entrances you are baiting and how close together they are. Mark, or record the location of, any burrows you are treating so that you can locate them when you return for follow up visits.

Follow the application instructions written on the label of the product you are using. Bait labels specify the quantity that can be used per area, for example the Talon Pellets label specifies for rats: '20-50g of bait per baiting point every 10 metres (5 metres in high infestation areas)'. Thus, the maximum amount of Talon Pellets that can be applied, for example, is 50g every 5m in heavy infestations, so if there are lots of entrance holes close together you will need to leave some un-baited.

A common tool used for applying baits to burrows is a long-handled serving spoon. In order to be confident of using the correct dose, ensure you know how much your chosen applicator holds by determining and noting in advance the weight of bait it holds.

The bait needs to be placed as far into the hole as possible. The reason for this, is primarily to minimise the likelihood of rats ejecting it from the burrow, but it will also help to ensure optimum uptake. Where not all holes are being baited, then select the ones with the most vertical tunnels as this will also help prevent ejection.

Ensure you don't block the tunnel with the bait – even if the rats are only feeding on your bait, they still need to be able to get out of the burrow to find drinking water. If bait is blocking the burrow, then they might clear a way through by ejecting some of it from the burrow.

After applying the bait, it is a label requirement that you backfill or cover the holes. The ideal thing to use is a handful of vegetation, such as grass, which can be lightly stuffed into the hole. If the hole is capped off too securely, the rats will make another exit. In so doing, they might either bury the bait or inadvertently eject it with the spoil, both of which are undesirable.

Using a grass bung will help to reduce the likelihood of bait being ejected from the burrow. And the rats can push it out of the way when they venture out to drink, so it will enable you to determine whether there is ongoing activity in the burrow.

Rat holes alongside timber grain store

Place Talon Pellets as deep as possible into rat burrows

Follow up measures

You need to return regularly to the site to search for and collect carcasses, remove any ejected bait and replenish burrows with fresh bait as required. Also, it is important to be comfortable that the environmental risk assessment still applies, or to update it as required.

It is good practice to return the next day after initial treatment to check that bait has not been ejected. Ideally, return early in the morning to minimise exposure of any ejected bait to non-targets. After this, follow up frequency will be determined by the technician, taking into account the local situation, the environmental risks and the toxicity of the product being used, along with the service level agreement with the customer. In some cases daily visits might be appropriate.

With the bait having been placed within the burrows, it is not possible to check how much has been consumed and how much has been hoarded for eating later. So you need to base replenishment rate on the estimated rat population. When using single feed baits such as Talon Pellets, then bait replenishment will not be required every visit – it should follow the pulse baiting principle of an initial 3-day interval, followed by 7-day intervals.

If multi-feed anticoagulants are being used and rat activity is ongoing, then suspect resistance, and consider switching to single feed anticoagulants, such as Talon Pellets.

Once activity has ceased, then on the final visit, the burrows should be backfilled and firmly sealed, to prevent entry by other non-target animals.

Applying Insecticides to control pests inside warehouses and other places where grains and other food products are stored.

Graham Matthews, Emeritus Professor of Imperial College London, writes for Pest Control News regarding the application of pesticides.

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Graham is currently engaged with the following projects.

- Helping WHO with treatment of aircraft to minimise survival of disease vectors moving to other areas
- Helping to compile a book on growing and protecting cotton in different parts of the world
- Looking at ways to improve pesticide application, including biopesticides.

The use of pesticides is increasingly being criticised due to their impact on human health and the environment. Prior to World War II, extracts from plants, notably pyrethrins extracted from Chrysanthemums, had been used, but with the need to protect food supplies in the UK, resulted in greater attention to need to control pests. Studies had already been initiated by Professor Munro who had set up a laboratory in Slough in 1927, initially to control insects found in imports of dried fruits from Australia. This unit was taken over by the UK Government as the Pest Infestation Laboratory and subsequently was moved to be part of the Food and Environment Research Agency at Sand Hutton and now FERA Science Limited.

Much attention was given to using fumigants, to enable penetration into stacks of grain, but with the banning of methyl bromide, the trend has been to sprays and more recently specific controls using pheromones to minimise the use of insecticides and operate an integrated pest management programme including use of insect growth regulators, baits and desiccants as well as pheromone traps, glue boards and sticky traps. Insect monitoring has indicated when insect control is needed. Ideally the building needs to have screens to prevent the entry of pests, but pests can also enter with batches of produce.

Insecticides may be used essentially using two methods. One involves producing a space spray aimed at flying insects, while the other sprays surfaces with a persistent insecticide to kill insects walking over the treated surface.

Space sprays

To control flying insects, the optimum droplets size is ideally between 10 – 20 µm. Droplets smaller than 5 µm may not be deposited on insects due to air turbulence caused by the movement of the wings, while larger droplets do not remain airborne long enough to be effective as shown in Table 1.

Table 1. Data on droplets when 1 litre/hectare of spray liquid is falling through 10 metres in still air.

Droplet size µm	Fall velocity m/s	Fall time from 10m	Number of droplets/cm^3
5	0.00075	3.7 hours	152
10	0.003	56 minutes	19.2
20	0.012	14 minutes	2.38
50	0.075	135 seconds	0.15

A nozzle used to create the spray will produce droplets that vary in size, so the aim is to spray a liquid that produces a volume median diameter (VMD) of 15 µm, for example, which indicates that half the volume is in droplets smaller than 15 µm, and the other half has larger droplets. Usually the spray is produced with a flow of air to project the droplets upwards and allow natural air movement within the warehouse to disperse the spray. The actual period the small droplets remain airborne will depend to some extent on the formulation of insecticide used and the humidity within the warehouse. Evaporation of water in a spray will decrease the size of droplets, so an anti-evaporant or oil in the diluent will maintain the effectiveness of a cold fog longer.

Timing the application of a cold fog is very important as it must coincide with the period when the insect pest is active and flying within the store. This is often after sunset, so electrically operated equipment that can be operated by timer is most appropriate for this application, so one or more suitable units need to be mounted so spray can be directed throughout the store. When to use it can be assessed using a pheromone or other types of trap to determine, whether the pest is present. Pheromones, with the scent of the female moth, such as *Ephestia* spp., have been used in warehouses to attract males. With sufficient traps the technique can disrupt mating, but these traps can also indicate when a space spray should be applied.

Where a manually directed spray is applied, the operator should start treatments furthest from the exit door, so that as the warehouse is treated, there is a clear passage to the doors. Where there are blocks of bales, alleyways between them should be traversed. In some situations the sprayer could be mounted on a trolley robotically following a set route between the stacks.

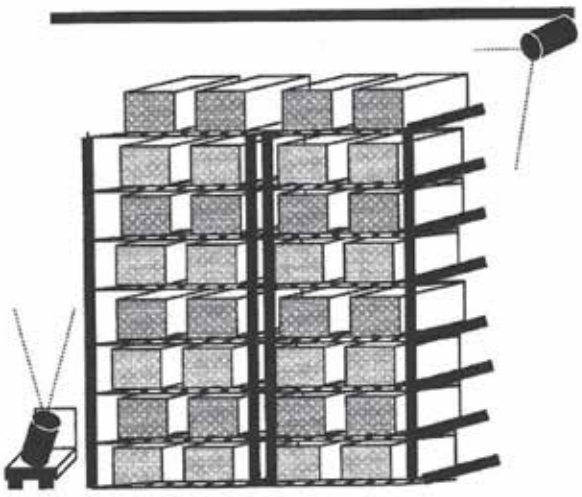
The flow rate of spray through the nozzle needs to be regulated to apply the minimum effective volume of spray. Too high a flow rate will inevitably increase the droplet size applied, while too low could require too long a period to treat throughout the warehouse. By using an ultra-low volume (ULV) spray which is generally less than 5 litres per hectare, surfaces are not wetted too much.

Spraying Equipment

For space spraying the most commonly used unit is an electrically operated, hand-held and easily portable sprayer that produces a spray in an air stream which projects the droplets away from the operator, while in some circumstances one or more units are fixed in selected positions and operated using a time switch set to coincide with the period when the insects are most active.

Fig.1 The spray projected from a cold fogger.

Fig 2 Comparison of ground v ceiling mounted cold fogger



The size of droplets sizes from a cold fogger are illustrated in Table 2. The Volume median diameter (VMD) indicates that half the volume of spray is in droplets that are smaller, while the other half is in droplets larger than the VMD. For the same volume, halving the droplet diameter increases the number of droplets by 8 i.e. 2^3.

Table 2 Example of the droplet size of a cold fog spray detected with a laser system.

	Dv 10	Dv 50 i.e. VMD	Dv 90
Kerosene based spray	6.1 µm	11.7 µm	22.9 µm
Water based spray	8.8 µm	16.13 µm	27.4 µm

Figure 3 Examples of cold foggers – hand-carried, knapsack and trolley versions.

Treating surfaces

As applying a space spray will not leave an effective residual deposit, protection of stacks of grain may require certain surfaces within the store to be sprayed with a residual deposit of insecticide. A number of different types of sprayer have been used in warehouses, ranging from manually-operated knapsack or compression sprayers to trolley mounted equipment. These sprayers usually are fitted with a lance with one or more hydraulic nozzles designed to apply a fan spray. The equipment should be fitted with a spray management valve to ensure constant pressure at the nozzle. Wall surfaces can be treated with a fan angle of 80° and an output no higher than 0.8 litre/minute to avoid excessive wetting of surfaces.

Although application of a residual spray is usually done with a conventional sprayer, there is increasing interest in using an electrostatic sprayer to apply a mist spray with a VMD between 50 and 90 µm to improve coverage.

Which replacement product should I pick?

Picking an alternative may not be straightforward, as every treatment is different.
Understanding the key reasons for previously buying Ficam W will help you decide on which alternative to try.

Key Reason/ Alternative	K-Othrine® Partix®	Cytrol® Forte	Effect® Microtech	Vazor® Provecta	Biopren® 6EC	Cimetrol Super
Absorbent Surface	✔	✔	✔			
Wide Range of Species	✔	✔		✔		✔
Extended Residual Life	✔		✔		✔	
Bedbug Resistance Management				✔	✔	✔
Wettable Powder		✔				
BPR Authorisation for next 10 years	✔					

SENSCI DEBUTS NEW LOOK, PRODUCTS AND SAFETY MEASURES

The Pest Control Manufacturer Introduces New Logos, Products and More

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Trenton, NJ – SenSci™ has gone through a tremendous transformation in 2021 by introducing a new product, two redesigned products, a new logo and freshly vaccinated experts eager for travel.

"We've been going through a lot of changes at SenSci and we're excited to finally be able to share them with everyone," said Chief Operations Officer Robert DiJoseph.

"When we were designing the product logo for the SenSci Pyramid™, I wanted to have something that spoke to our core value of being audacious," said Jeff White, Chief Product Officer at SenSci. "We wanted something bold and unique. The design for the Pyramid was exactly what we were looking for and decided to move in that direction with all of the product logos."

Logos weren't the only thing changing at SenSci; its product line also received a face-lift. The SenSci Pyramid joined the line and the SenSci ActivCR™ bullet lure took the place of the SenSci Activ towelette. Finally, the SenSci Volcano® was redesigned to accommodate the new format of the SenSci ActivCR lure.

"We're proud of the direction we're moving and look forward to the continual expansion of the company," DiJoseph said.

DiJoseph went on to explain that in addition to the physical changes of the brand, their experts have taken the steps to ensure their safety as they return to in-field work.

"Safety is very important to our company and a key component to our work is through educational workshops that we conduct all across the country," he said. "Unfortunately, COVID-19 halted our in-person instruction, and we went virtual, however, we're excited to announce that we are once again returning to in-person educational offerings."

SenSci experts Jeff White, Danny White and Sarah Latyn have all been recently vaccinated for COVID-19 and are now available for bed bug workshops, speaking engagements and business consulting.

"The Coronavirus definitely changed the way we operated," said Chief Product Officer Jeff White. "We typically do a lot of on-site trainings and consultations for pest control companies all across the country but that quickly changed when the virus started spreading."

White explained that his travel schedule, which is usually booked solid throughout the year with speaking engagements and on-site trainings, was wiped clean due to COVID-19, however, with his recent vaccination he's ready to hit the ground running again.

"I'm now fully vaccinated and ready to get back to what I love to do, educating and traveling the country," he said. "Virtual trainings are a great option for many but there's nothing like seeing and interacting with your clients in person."

Sarah Latyn, Quality Assurance and Training Coordinator for SenSci, has taken the adaptations in stride but has her bags packed and ready for the next travel destination.

"During the pandemic, our travel schedule was shut down but that didn't stop us from conducting the quality training and education that clients expect from us," Latyn said. "We've adapted to the changing times but now that we're fully vaccinated, we can bring the training you know and love back to your business."

DiJoseph mentioned that although his team is fully vaccinated and ready for in-person offerings, virtual trainings are still available if companies feel more comfortable to go that route.

"Although we're eager to get back out there, virtual training sessions are still available for companies that prefer that platform," DiJoseph said. "We had tremendous success with our back-to-back virtual Bed Bug Boot Camps and expect to continue them for those who prefer that option."

The SenSci experts are available for on-site bed bug training workshops, speaking engagements, business consultations and virtual trainings. For more information or to book one of the experts for your event, click here. To learn more about the SenSci Products, visit: www.SenSciOnline.com. Be on the look out for an updated website coming soon!

LymeApp

Space Agency launches 'LymeApp' to map tick distribution and combat Lyme disease

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The LymeApp project will help prevent the spread of Lyme disease in the UK. Already officially launched in Scotland, the app is planned for England and Wales in 2022. The plan is for it to be rolled out for the Northern Hemisphere generally.

The European Space Agency-sponsored project has received more than half a million pounds of match-funding through the UK Space Agency.

LymeApp, a website and linked app, continues being developed by International Disease Mapping Apps (ID MAPPS) Ltd, a company formed by Scotland's Rural College (SRUC), a representative company Highland Health Ventures Ltd (a collaborative partner for NHS Highland), ERGO (Environmental Research Group Limited) and Belgium-based Avia GIS NV.

The demonstration phase of LymeApp was launched in Inverness, in August 2019, where campaigner Morven-May MacCallum – who was left bedridden for eight years by Lyme disease – was among the speakers.

The £1.1m project uses satellite data to help highlight where the ticks are and where the disease has been detected. It received £555,000 from the UK Space Agency, through the European Space Agency's Integrated Applications Promotion.

LymeApp combines the satellite information with data from the Scottish Lyme Disease and Tick-borne Infections Reference Laboratory in Inverness, as well as information from general medical practitioners and those exposed to ticks through work or recreation. It uses spatial modelling techniques to produce detailed maps of where the ticks are likely to be and where the disease is reported most often. Using citizen science technology LymeApp also allows the public to report locations, via their phone, of tick sightings and bites to this central database.

Lyme disease – also known as Lyme borreliosis – is an infection that can be spread to humans by ticks carrying the Borrelia burgdorferi bacteria. If not diagnosed and treated promptly, it can lead to a chronic, debilitating disease. Diagnosed cases have reached an estimated 3000 per year in the UK and more than 65,000 per year in Europe.

Project lead Professor George Gunn, SRUC's Head of Veterinary Epidemiology, said: "This is an extremely exciting, integrated project involving satellites, emerging technology and big data. Following a successful feasibility study, I would like to thank the sponsors and the businesses and individuals who have agreed to take part in this demonstration phase."

Dr Roger Evans, Consultant Clinical Scientist at NHS Highland, said: "LymeApp is an innovative way of involving healthcare professionals, veterinarians and epidemiologists with involvement of the general public to reduce the transmission of Lyme disease among the people of Scotland. It is hoped that the fully developed products will be able to be extended to other countries where this disease is common."

Morven-May MacCallum, who is from the Highlands, said: "Lyme disease is an illness of unquestionable power and the damage it's had on my life and for thousands like me is unmeasurable. It's wonderful to see professionals from across different areas of expertise come together to help advance our knowledge of this disease and, in the process, hopefully find the answers which are so desperately needed."

Those looking to find out more about the project can visit **https://idmapps.com/**

S-methoprene

How does it work and what does it do?

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S-methoprene is an example of an Insect Growth Regulator (IGR). Specifically, it is an insect juvenile hormone analogue (JHA) type of IGR. What this means is that it interferes with the development of the juvenile stages of insects. It also affects fertility and egg production of female insects.

While S-methoprene does not kill adult insects, it is a valuable component of a professional pest controllers arsenal. Some products are available that contain S-methoprene and a standard insecticide that *will* control adult insects – a good combination. S-methoprene is especially important as a resistance management tool. Pyrethroid resistance is known in bedbug *Cimex lectularius* populations worldwide so it is ever more important to manage resistance when undertaking insect control.

Bedbug control

The activity of S-methoprene, against bedbug nymphs, can be quite impressive when the correct dose is used. A 2011 paper, presented at ICUP 2011, by Bajomi *et al*., provides the detail.

The correct dose of S-methoprene totally stopped nymphs developing to the adult stage. This worked for laboratory (insecticide susceptible) strains of bedbugs, which is to be expected. Interestingly, and crucially, this was also the case for field (resistant to synthetic pyrethroids and carbamates) strains. The susceptible bedbugs showed slightly higher mortality than the field bedbugs. Intriguingly, the susceptible strain was more active and mobile than the field strain, which may explain the difference in mortality. The increased movement could result in more insecticide being contacted, rather than any basic difference in susceptibility.

The effect of S-methoprene varies depending on the bedbug nymph stage that is exposed. 3rd or 4th stage nymphs have their development to adulthood totally stopped. When the exposure to S-methoprene is delayed until the 5th stage, some nymphs moult successfully to the adult stage. However, these adults die prematurely.

The typical impacts of S-methoprene, on bedbugs, are:

- reaching supernumerary stages (an extra nymph stage that is infertile)
- cuticle thinning
- irregularities in cuticle deposition thus trapped in exuviae (the caste 'skin')
- having feeding problems due to deformations of gut
- IGRs interfere with the formation of the new cuticle or disturb metamorphosis
- All these effects cause death

Normal adult (right), supernumerary 6th instar (left); ecdysial line just visible

Nymph with mid-gut prolapsed through abdominal wall

Nymph trapped within partially ecdysed exuvium.

Images provided kindly by Dr Richard Naylor of cimexstore.co.uk

Flea control

S-methoprene is also an effective option for flea control e.g., cat fleas *Ctenocephalides felis* when integrated with other control measures. The development of flea larvae is interrupted and the ability of female fleas to lay viable eggs is greatly reduced. This is explained well in a 1997 review paper by Michael Rust.

The residuality of S-methoprene is surface sprays, for public health pest control, can be surprisingly long. Some S-methoprene products claim a residual effect of many months against the juvenile life stages of fleas.

It is good advice to avoid the use of S-methoprene against stored product insects and textile pests. This is because IGRs can prolong the larval stage of insects, therefore extending the time that this feeding / damaging life stage is active for.

Interesting, flea eggs can be affected directly by S-methoprene. A study found that newly-laid flea eggs, exposed on treated filter paper, are affected by methoprene. However, this is only the case for newly-laid eggs. Flea eggs that are 24-48 hours old at the time of contact with methoprene are not affected and hatch normally. For best results, the female flea needs to be treated. When adult female fleas are exposed to methoprene, the 'ovicidal' (egg-killing) activity can persist for up to 70 hours after exposure. Specifically, methoprene kills embryos in the flea egg.

Effects on flea larvae vary depending on the larval stage. For 3 ½ day old flea larvae, that are non-feeding, methoprene prevents them from developing into adults. For third-stage flea larvae, methoprene prolongs their development. This results in a size increase, of approximately a third, before killing them at this stage.

More on the residuality of some methoprene treatments, specifically against fleas… The long residual activity of IGR treatments indoors is a real benefit. Studies show that carpets treated with methoprene give total control of flea larvae for at least 56 days in lab conditions. Further work indicated that residues remain active for at least 7 months. Beyond this and at the right dosage, methoprene deposits in carpets were found to inhibit 75–100% of larval development even one and a half years after treatment.

BPR, HSE and biocide regulations, what is happening now?

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As BREXIT settles, what is happening at the Health and Safety Executive with biocidal product registration?

BPR

Great Britain was previously governed by the EU Biocidal Products Regulation 528/2012 (BPR). Products covered included - disinfectants, preservatives, pest control, anti-fouling paints and embalming products. Perfect if you are a pest controller with sidelines/special interests in taxidermy and embalming, as one regulation would 'fit-all'. In seriousness it is easy to see why these products have been grouped together as biocides.

BREXIT questions

One of the BREXIT questions frequently asked was 'what will happen to our chemicals? And it's a worthy question. At present the HSE will simply reflect what BPR laid out and follow the same guidelines. Which is fine, as products were still granted final approval at member state level, and we are used to the EU BPR. The issue will arise (and has already) when products require re-registration. Currently, insecticides are granted 10 years registration and rodenticides 5 years. Luckily there are a fair few products that have a substantial amount of time left on their registration, especially some of the insecticides, a great example being Bayer's Ficam D (authorised until 2028).

Products which are due for re-authorisation, whereby their registration will run out, will now have to go through HSE's own authorisation system (GB BPR). It'll be a very similar system to the EU BPR, (now GB BPR for us) but the main issue is down to cost. Manufacturers now have to pay twice to have a product re-authorised in both the EU (European Union) and Great Britain (GB). This is going to be an issue and the UK may lose some products. If the market is not sufficient to support re-registration, products will simply not be renewed - their registration will be revoked and they will be lost.

Its not all doom and gloom! We have already seen some great new products come into the market, BASF's Selontra and Killgerm's Vazor Phepra CS to name a couple. Bayer's Harmonix rodent paste is also on the horizon. It is sometimes easy to assume that when the industry loses a product it is because it's banned or the chemicals are further restricted or there has been an incident. Other reasons are that it doesn't pass the risk assessment imposed on it, whereas in reality it is commonly down to economics.

If a product you are using loses its authorisation, or is not re-registered, the usual period to legally use the product by is 365 days from date that the registration runs out.

Other legislation

Control of Pesticides Regulations (COPR) will still eventually be superseded by GB BPR, however some products will continue to be regulated under COPR but evaluated under GB BPR or EU BPR in Northern Ireland (NI). This will be until such point that a decision is made to place all authorisations via GB BPR or EU BPR in NI.

REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) is now UK REACH. This refers to regulatory framework for chemicals in the Great Britain. Some of the main aims of UK REACH are to ensure a high level of protection of human health and the environment from chemicals, making manufactures and importers responsible for risk management (associated with the chemical uses) and to promote the use of alternative methods for the assessment of the hazardous properties of substances. UK REACH will affect us all at some level, whether it be via work or personal life regarding the substances we use in our own homes.

In summary, it is still wait and see. At least we know the score much better now and as the split from the European Union settles, we are much clearer on approvals and how the HSE will respond.

Asian hornet identified in Ascot

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The National Bee Unit has confirmed the sighting (in October 2021) and monitoring is underway to detect any other Asian hornets in the vicinity. The nest was destroyed on the 11th October.

The Asian hornet is smaller than our native hornet and poses no greater risk to human health than our native wasps and hornets. However, they do pose a risk to honey bees and work is already underway to monitor for any hornet activity and to identify any nests nearby.

This is the first confirmed UK sighting since September 2020, when one Asian hornet nest was identified and destroyed near Gosport, Hampshire.

Defra's Chief Plant and Bee Health Officer Nicola Spence said:

By ensuring we are alerted to possible sightings as early as possible, we can take swift and effective action to stamp out the threat posed by Asian hornets. That's why we are working at speed to locate and investigate any nests in the area following this confirmed sighting.

While the Asian hornet poses no greater risk to human health than other wasps or hornets, we recognise the damage they can cause to honey bee colonies and other beneficial insects.

Please continue to look out for any Asian hornets and if you think you've spotted one, report your sighting through the Asian hornet app or online.

It is important to take care not to approach or disturb a nest. Asian hornets are not generally aggressive towards people but an exception to this is when they perceive a threat to their nest.

If you suspect you have seen an Asian hornet you should report this using the iPhone and Android app 'Asian Hornet Watch' or by using our online report form. Alternatively, e-mail alertnonnative@ceh.ac.uk.

Please include a photograph if you can safely obtain one.

Identification guides and more information are available and if you keep bees you should keep up to date with the latest situation on the gov.uk sightings page and on BeeBase.

Further information

- The cost of eradication on private land will be met by APHA
- The Great Britain Non-native Species Secretariat is a joint venture between Defra, the Scottish Government and the Welsh Government to tackle the threat of invasive species. More information can be found on their website
- For details on the appearance of an Asian hornet, please refer to the BeeBase guide or the non-native species identification guide
- Photographs of the Asian hornet are available on our Flickr account
- The Asian hornet (*Vespa velutina*) is not to be confused with the Asian giant hornet (*Vespa mandarinia*) which has been found in North America fewer than 10 times as of August 2020

ID Corner:
Indian Meal Moth

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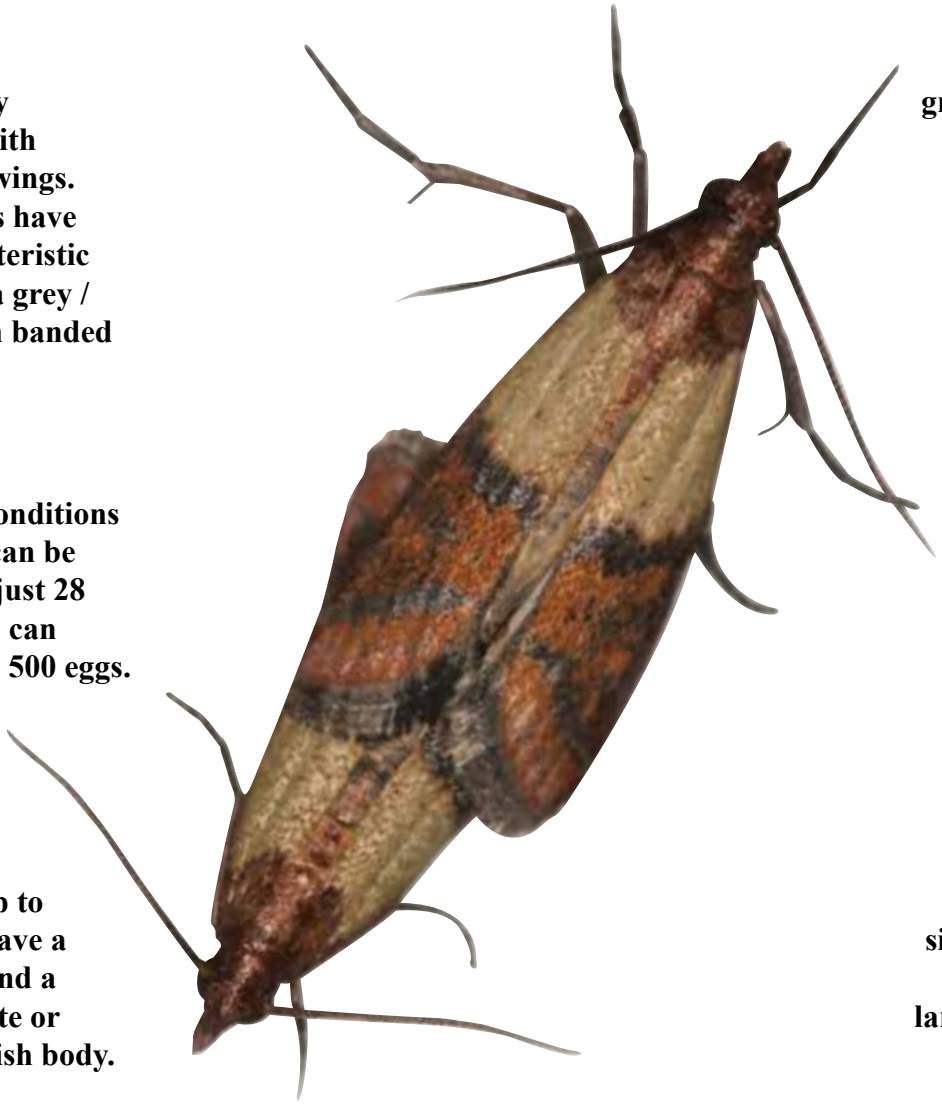
Plodia interpunctella
Family: Pyralidae

A small moth approximately 16mm wide with outstretched wings. The forewings have a very characteristic pattern with a grey / bronze-brown banded appearance.



A common pest with great economic impact in warehouses of cereals, seeds, dried fruits, nuts, flour...

Under ideal conditions the life cycle can be completed in just 28 days. Females can produce up to 500 eggs.

The main damage to the food product is caused by the larvae. They also have the ability to pierce some product packaging.

The larvae, up to 12mm long, have a brown head and a yellowish-white or slightly greenish body.

The larvae produce silk in the areas where they feed. When the larva is fully developed it migrates from the feeding grounds to pupate.

Top photo:
Adults of *Plodia interpunctella* mating.

Bottom photo:
Larva of *Plodia interpunctella*.

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PESTTECH 2021

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PestTech Seminar Schedule

10.00hrs – 10.30hrs

'An introduction to CALM'

Every week 125 people in the UK take their own lives. And 75% of all UK suicides are male. CALM exists to change this. Join our speaker from CALM as they talk through who CALM is, what they do and the importance of talking openly about mental wellbeing and suicide. They will discuss how CALM uses comedy, music and sport to breakdown the ta-boo of suicide, and help people to stop living miserably.

10.45hrs – 11.15hrs

'The future of bee control'

Clive Stewart, Westart Apiaries

How to deal with bees has become something of a thorny subject of date. In this talk Clive, who has over 20 years' experience, in keeping and removing bees, will give the benefit of his experience and provide solutions to having to resort to lethal control

11.30 –12.15 – 13.00hrs

'The future of Pest Management?'

Oliver Madge, Pestwise

There can be little doubt that the pest control industry and the way that we approach control has changed significantly over recent years. Oliver brings his knowledge and experience to discuss these changes. He will also discuss why we need to adapt and incorporate technology and the importance of up-skilling staff to be capable to deliver services with a tighter level of pesticide use.

12.30 – 13.15

'Tactics and Strategy, understanding a pest management program'

Alex Wade, Wade Environmental

Approaching any pest control programme without having a plan or strategy often results in treatment failure. To this end, Alex brings his vast experience in the pest control sector to discuss how best to approach this arguably lesser appreciated aspect of pest control and guide delegates on how best to approach pest problems to try and ensure that control programmes are successful.

13.30hrs – 14.00hrs

'Glue Boards – is there a future?'

John Hope, NPTA

We will all be aware of the pressure being placed upon glue board use in the UK. In this talk John will discuss where this could all end and what we need to do as an industry to try and ensure that, yet another control measure is removed from our arsenal.

14.15hrs – 15.00hrs

'Your complete answer to wildlife Control'

Ken Jenkins, Landmark Rabbits

Ken will discuss the importance of preventive measures and achieving instant results in removing rat populations through the use of Thermal imaging and the very specialist world of Urban shooting. The key to the audience is how you can benefit and easily profit from these in the world of subcontracting.

Please use the live link to register for delegates. https://pesttech21.reg.buzz/

NPTA tomorrow's association for today's technician

PESTTECH 2021

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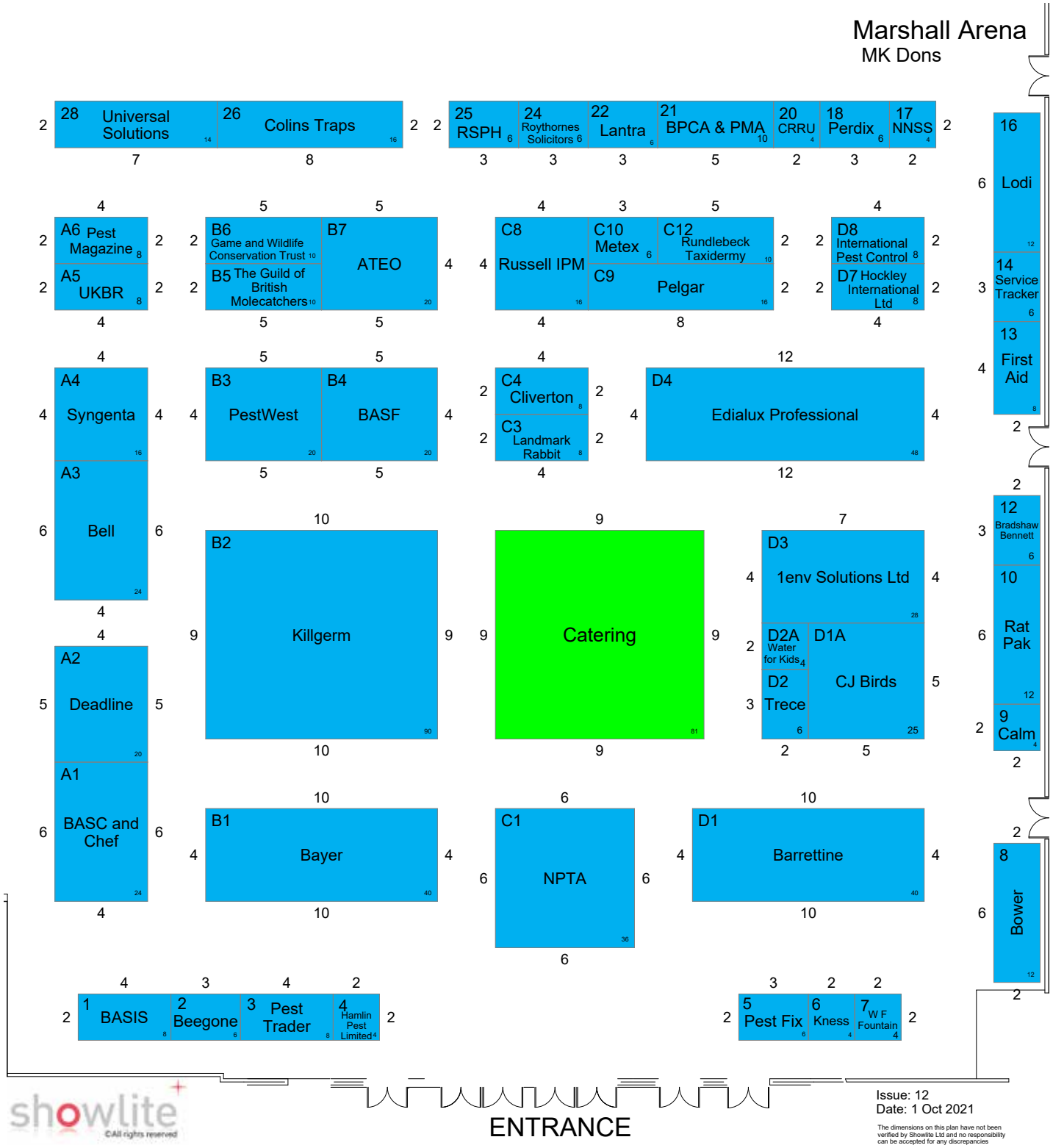

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NPTA resume face-to-face training courses

As our members are aware, as part of our commitment to ongoing development, we are always keen to promote and devise new training courses. With the lifting of Covid restrictions, we are now pleased to be able to announce that we will be resuming face to face courses starting in October 2021.

These will run alongside our virtual interactive courses which proved extremely popular during the pandemic, allowing members to keep up to date and learn new skills from the comfort of their own home or office. However, not all pest control training can be run in this way.

Therefore, we will be reintroducing our face to face and ever-popular risk assessment and environmental risk assessment course which aims to provide pest controllers with the knowledge and skills, not only to write an effective health and safety risk assessment, but also how to approach environmental risk assessments. This course looks at the hazards and controls necessary to ensure that risks to people and the environment are reduced to an acceptable level – so important in an ever-changing work environment.

In addition, a new course has also been developed which examines rodent problem solving. It would be reasonable to state that rodents make up the majority of work that pest controllers undertake but can cost a pest control business significantly should it go wrong, both in terms of financial cost and reputation.

We need to remember that rodents are adaptable and have been around for thousands of years, so failure to adapt with them and re-examine the way we approach methods of control can only end one way – a win for the rodent! This course is designed to provide the skills necessary to resolve any situation however complex and is different from other rodent based courses in that it challenges conventional baiting strategies and focuses on practical scenarios and real-life situations.

This course has proved so popular that the first one is already fully booked. In brief, areas covered on the course are as follows:

- Practical exercises depicting rodent issues
- Resistance, both genetic and behavioural
- Drainage and the link to rat activity
- Understanding rodent behaviour and what traits enable us to exploit it for control
- Survey techniques
- Tools for identifying activity and trends
- Understanding how to control and what to do when it all goes wrong

As well as this, we will be reintroducing our live virtual interactive courses in the winter which are free to members. They are also run at times designed to ensure that learning does not conflict with working hours. These courses have proved extremely popular with our members, many of whom have requested they continue despite the end of restrictions.

We are so keen to ensure that pest controllers feel adequately trained and competent to carry out their day-to-day activities that not only are we running virtual courses free of charge but will be offering very large member discounts for our face-to-face offerings.

Don't forget, we as an Association pride ourselves on the fact that we are all current pest controllers or have had extensive field experience at the sharp end of the pest industry which we all love. So come and join us and look out for future courses.

NPTA
tomorrow's association
for today's technician

PROMPT® Register

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2 Months to go for collecting PROMPT CPD Points

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Members of the PROMPT Register for professional pest controllers now have 2 months to collect the CPD points their annual requirement of CPD points. By demonstrating their commitment to Continuing Professional Development, members of the PROMPT Register can demonstrate they have the most up-to-date knowledge on the integrated management of pests and can deliver pest control services for their customers in a safe, responsible and efficient way.

Due to the restrictions put in place because of Covid-19 PROMPT members have been given more flexibility in how they met their CPD requirements. For the membership years 2020 and 2021 PROMPT members have been allowed to meet their CPD requirements over a 2-year period, rather than annually. For example, a full PROMPT member will have to collect 40 CPD points over 2020 and 2021, rather than 20 CPD points annually. This increased flexibility has provided time for our members to adapt to carrying out more of their training remotely, as well as allowing members an opportunity to return to live training events as they have become more widely available in 2021.

Fortunately, PROMPT members still have a number of opportunities to meet their CPD requirements over the coming months. This includes live events, most notably PestTech 2021 which is being hosted at the Marshall Arena in Milton Keynes on Wednesday 10th November. PROMPT members will have the opportunity to collect up to 8 CPD points at this event both through attendance and attending the technical seminars.

There are also a range of other opportunities for training and development over the next couple of months, whether that is attending training events, reading technical magazines or watching webinars. More information on opportunities available can be found on the PROMPT website as well as in a new monthly CPD bulletin which will be sent out to all PROMPT members.

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Back to Basics

With the world still adapting to the new rather erratic supply lines and market generally I thought it worthwhile to take a few steps back and look at the basis of what we do – supply goods and services, and a quick look at what governs contracts in the UK.

As a consequence of the dynamic shift in attitudes which struck the late 20th century, the Sale & Supply of Goods ("SGA") Act 1979 was an early attempt to provide consumers with greater protection and to govern commercial contracts. Namely those with goods that are identified and agreed to be purchased by a buyer. On the whole, the SGA permits the sale of goods delivered must be of satisfactory quality and fit for purpose.

Although the rules which govern sales between one business and another are somewhat limited, it is taken into consideration that the contracting parties are more sophisticated, in a stronger negotiating position and are able to decide on fair terms.

However, like in any contract for sale, the SGA implies four terms: -

- the goods must correspond with the description given,
- the person transferring them has good title and the right to transfer the item sold,
- the goods will be of satisfactory quality and if a sample is provided, and
- the goods will correspond with this sample

Having considered this, it is the norm whereby business buyers will not be entitled to a full refund under the terms of their contract if the product is only very slightly faulty. However, this does not limit a business' right to compensation for any loss caused.

On the whole, when goods are bought or sold, they should match the description given and be of a satisfactory quality. If they are not, it is the responsibility of the seller to rectify the failure to meet these standards. This could be by refund, repair or replacement.

The supply of Goods and services 1982 adopts most of the SGA but with one very important addition that the person supplying the service must meet the standard of a reasonably competent professional exercising reasonable skill and care. If no price has been agreed – that charge or price must be reasonable.

Moreover, the Unfair Contract Terms Act 1977 ("UCTA") is of particular importance when it comes to excluding or restricting liability in a business-to-business ("B2B") supply of goods contract.

Although commercial parties can exclude liability for many of the implied terms under UCTA, there are certain terms which cannot be excluded. This includes any clause purporting to limit or exclude liability for death or personal injury where it is caused by negligence; any such clause is invalid.

Liability for other implied terms, such as negligence (other than where it causes death or personal injury), breach of contract and misrepresentation can be excluded or limited, so long as the clause satisfies the reasonableness test under UCTA.

What is considered 'reasonable' under UCTA requires a multifactorial test, and whilst liability may be excluded for many of the implied terms, clauses must be drafted with care so as to not fall foul of UCTA.

So, starting with any contract which hopefully is in writing with an order form and acceptance, look at the terms and conditions – what is or is not being excluded, what is the limit of any liability and how do disputes get resolved ? Before you get into a dispute its always worth knowing where the battle lines are. Putting in your own mediation clause is sensible and often overlooked.

If you require assistance or advice on drafting or reviewing your contracts, please feel free to contact me on 07789 401 411, giles.ward@milnerslaw.com or linkdin www.linkedin.com/in/giles-ward-publicinquiryexpertcommerciallitigationexpertlawfirm/

Your guide to the pest control

2021 TRAINING DATES

Killgerm Training run courses nationwide offering different types of courses for different levels of experience and knowledge. Details of all course dates and locations are available online at: **www.killgerm.com/pest-control-training-calendar**. There is also a full list in the Killgerm catalogue on pages 235-237. For further information or to book your place on a course call: **01924 268445** or email **training@killgerm.com**.

November 2021

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01/11/2021 & 02/11/2021 Unit 3 - Reigate
08/11/2021 & 09/11/2021 Unit 1 - Reigate
15/11/2021 & 16/11/2021 Unit 2 - Reigate
17/11/2021 Examination - Reigate
09/11/2021 Killgerm Principles of Rodent Control - Ossett
10/11/2021 & 11/11/2021 Killgerm Principles of Insect Control - Ossett
11/11/2021 Safe use of Air Weapons for Bird Control - Ossett
16/11/2021 Killgerm Principles of Rodent Control - Huntingtower Hotel, Perth
17/11/2021 Trapping Techniques - Ossett
17/11/2021 Practical Bird Netting - Bristol
23/11/2021 Killgerm Principles of Rodent Control - Bristol
24/11/2021 & 25/11/2021 Killgerm Principles of Insect Control - Bristol

December 2021

07/12/2021 Killgerm Principles of Rodent Control– Ossett

These dates are to be reviewed in accordance with government guidelines

Some courses remain available online. https://training.killgerm.com/

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