



Crystalkil

Pest Control ServiceTM

Pest Control & Bird Control Service

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Pest Control Service

Crystal Services plc is one of the UK's leading pest prevention specialists. A comprehensive service is provided for the control of all forms of pests including rats, mice, cockroaches, ants, wasps and birds.

Our customers are spread throughout the food trade, health care, industry, commerce and the public sector. We provide the finest supervised service, giving our customers, their customers and staff, safe, effective protection for their working environment and their reputation. Inadequate or poor pest control can lead to fines or imprisonment under the Food Safety Act 1990.



SURVEY

We undertake a thorough survey of your premises, so that a full understanding of your current position enables us to recommend the most suitable treatment. Each survey is free of charge and can be arranged within 24 hours.

REPORTING

With every visit by our technicians, a treatment report sheet, detailing all work undertaken, is left on site in the Report File provided. Any additional recommendations are also noted with a follow up to ensure appropriate action is taken.

QUALITY CONTROL

The development of our management structure and personnel incorporates supervisors, field biologists and inspectors. Thorough initial training and constant updating of knowledge ensures technical expertise and quality assurance.

COSHH

The COSHH regulations require us to assess and redefine the risks that may accompany the use of any hazardous substance in the working environment, and to take all reasonable measures to protect against, or minimise, that risk. Our policy is to meet all our legal obligations and to keep our customers constantly up to date with the chemicals we have used in their premises during our treatments.

DAMAGE BY PESTS

If a business is involved in the manufacture, storage, transport or sale of food, and infestation is present, the owner must take steps to control the infestation or notify the Local Authority.

PENALTY: Notice to improve; recovery of expenses incurred by Local Authority from owners.
(Prevention of Damage by Pests Act, 1949).

FOOD SAFETY

Any business that grow, process, store, distribute or sell food must ensure the food is safe to eat. It is an offence to treat, sell, advertise or be in possession of goods that are unfit for human consumption. Businesses must prevent food and food products being damaged or contaminated by pests. Food premises must be kept in good condition, clean and free from rubbish which may attract pests.

PENALTY: Improvement notices; Prohibition Orders to close premises; seizure of unfit food; disqualification from catering for up to 2 years; fines of up to £2000 and a 6 month prison sentence per offence, or if a 'key' offence, fines may go up to £20,000; in the Crown Court, unlimited fines and up to 2 years imprisonment.
(Food Safety Act, 1990 incorporating Food Hygiene [General] Regulations, 1970).

FOOD HYGIENE

Food must not be contaminated by pests. Windows in food preparation, processing and treatment rooms must where necessary be fitted with insect proof screens. Moveable food premises, e.g. vehicles, vending machines, stalls, marquees and occasional catering rooms such as village halls, must be kept in good condition to avoid the risk of harbouring pests and food contamination.

PENALTY: Prosecutions in the UK will be made under the Food Safety Act 1990, with similar penalties.
(European Legislation EEC Food Hygiene Directive, 1993).



Rodents

Rodents are a major pest because of the disease they transmit and the damage they cause. 1 in 15 food premises are rat infested, higher still for mice. All rodents must gnaw regularly to keep their continually growing incisor teeth at a manageable length. They live in colonies of extended families and are capable of rapid reproduction. Rodents usually feed at night and consume up to 10% of their body weight daily. It is common to see them collecting food during the day.



DAMAGE AND FOOD CONTAMINATION

Damage is caused by gnawing woodwork, pipes, wires and on an endless variety of stored commodities from paper to soap. Gnawed electrical wires cause power failures and fires. Burrowing often causes subsidence in roads, pavements and buildings.

Contamination accounts for 15% of worldwide food loss annually. It may take the form of partially eaten materials, ripped packaging and spillage as well as the presence of urine, rodents hairs, droppings and smell.

DISEASE

Weils Disease or Leptospirosis is a rat borne disease. Bacteria causing it, live in the rat's kidneys and are transferred in the urine. They pass into the new host through cuts or by swallowing infected water, and urine soaked materials. 60% of British rats carry the bacteria.

Rat Bite Fever may be contracted if bitten by a rat.

Brucellosis Salmonellosis (food poisoning) and plague are other examples. Salmonellosis bacteria can be transferred on the animals feet or in their droppings. Plague (Pasteurella bacteria) is normally transmitted by rodent parasites such as fleas, when they bite other animals, including man.

PREVENTION OF PROSECUTION

Under the Prevention of Damage by Pests it is an offence to knowingly harbour rodents in any premises and you can be prosecuted.

BROWN RAT (RATTUS NORVEGICUS)



This is the most abundant of the three common rodent pests in the UK, and can be found anywhere offering food, water and shelter. It is the species found breeding in rivers, fields, buildings and sewers. They like to feed under cover. A rapid breeder with 3-6 litters per year of a litter size of 8, they are sexually mature at 10-12 weeks. Signs of activity include well marked travelling routes, gnawing marks and greasy smears left on walls, pipes and around floor joists, against which they habitually brush. They are neophobic and therefore cautious with new objects and food sources.

BLACK RAT (RATTUS RATTUS)



This rat is now rare in this country and most commonly confined to shipping ports and coastal areas. Also known as the ship rat, it is historically infamous as the carrier of the plague flea. Smaller and more agile than the Brown rat, it is equally omnivorous with a preference for fruit and spices.

HOUSE MOUSE (MUS DOMESTICUS)



Living mainly indoors, mice are difficult to exclude as they squeeze through gaps as small as 7mm. Omnivorous feeders but preferring cereals and nuts, water is not vital as they derive moisture from the food they consume. They tend to feed by taking small, multiple amounts and quickly lose interest in one food source. Pillars of dirt, grease and urine are sometimes found along habitually used runways. Mice urinate constantly and defecate around 80 times a day, rats 40 times. With a litter size of 4-11 they litter 7-8 times a year. A pair of mice and their offspring can produce about 2000 individuals in a year under favourable conditions.

THE NEED FOR BIRD CONTROL

For the property owner feral birds can be a serious menace, especially in concentrated urban populations. They pose a very real risk to health, damage foodstuffs, deface buildings and increase property maintenance bills. Most birds present no problem at all, but a few species become pests due to concentrated populations or the environments they inhabit.



FERAL PIGEON (COLUMBIA LIVIA)

The number one urban pest throughout the world. Descended from birds which were originally domesticated for food, these birds have reverted to their wild state, but now live in close proximity to Man. They are responsible for most fouling of buildings in towns and the transmission of diseases to humans such as ornithosis.



STARLING (STURNUS VULGARIS)

A major problem in certain areas, when large numbers gather for night roosting. The noise, smell and extensive fouling caused by these congregations can be horrendous. Fungi associated with the dried guano can give rise to serious human disease problems.



SPARROW (PASSER DOMESTICUS)

This is a major problem for the food industry, with populations becoming established inside warehouse and retail premises. These 'flying mice' gain entry through very small holes and then damage and foul stored food and are extremely difficult to deal with, some methods requiring Special Licences (UK).



HERRING GULL (LARUS ARGENTATUS)

These large aggressive birds are causing an increasingly significant problem due to their recent use of buildings as sites for breeding colonies. The noise, mess and smell associated with such sites can cause serious distress to those in the buildings concerned.

PROBLEMS

HEALTH HAZARDS

Pest Birds are vectors of disease carrying a wide range of bacteria such as psittacosis and ornithosis (a potentially fatal type of influenza in humans). Salmonella, Listeria and Vibrio cholerae food poisoning organisms can be picked up by birds and then scattered around, contaminating water supplies, cattle pastures and human foods directly. The Food Safety Act 1990, places a formal responsibility on organisations to act with 'due diligence' in relation to standards of hygiene.

DAMAGE TO BUILDINGS

Nesting materials, fouling and accumulated debris frequently lead to blocked gutters and downpipes, damaging overflows and possible water ingress. Bird droppings also contain harmful acids that actually erode stonework. Bird fouling mars many building facades, especially those with ornate features and this means expensive maintenance work to clean masonry, windows and paintwork and to repair resultant damage.



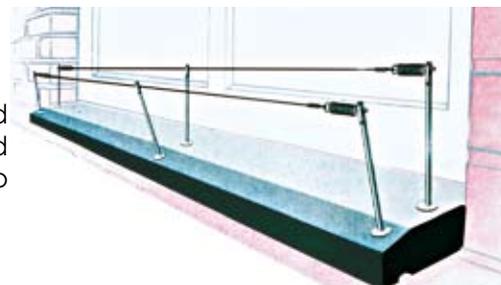
DANGER TO HUMAN SAFETY

Bird droppings can be extremely slippery, leading to problems in areas where the public have access. Bird nests can block chimneys and flues, which can lead to serious build up of poisonous gases. Bird nests can be the source of many unpleasant insects including, blood feeding insects such as fleas, mites, bugs, ticks and lice, fabric damaging insects such as carpet beetles and clothes moths, stored food pests like spider/dermestid beetles and book lice, and carrion feeding insects such as house flies and blow flies.

BIRD REPELLENT SYSTEMS

SPRINGWIRE-AVISTRAND

Target species-Pigeons and gulls. Suitable for ledges, sills, cornices and other level roosting points, this system consists of stainless steel posts and spring tensioned plastic coated wire in one or more rows, designed to prevent birds from landing.



PERCHING DETERRENTS - POINT SYSTEMS

Target species-pigeons and sparrows. A range of propriety systems, featuring stainless steel rods in single or multiple spine configuration mounted on polycarbonate bases. They are generally flexible enough for installation on most surfaces, even roof ridges, light fittings and signs.



NETTING

Target species-pigeons, gulls, starlings and sparrows. Fine mesh UV resistant polyethylene netting is used to screen areas completely, so denying birds access to areas such as lightwells, the undersides of canopies and porticos, roof areas and other roosting points.

BIRD BARRIER COIL

Target species-Pigeons. An extendible coil specially designed to stretch over long areas such as ledges, parapets, ridges, girders and signs. The unique shape and instability of the coil prevents birds from landing on or in between the coils. There is no risk of hurting the birds.

REPELLENT GEL

Target species-pigeons and starlings. Applied in strips to horizontal ledges, the gel is a non-viscous compound that depresses under a bird's weight to create discomfort and to encourage them to move to a better perch elsewhere. The gel is sealed to prevent the adhesion of airborne pollutants and to prevent entanglement of bird's flight feathers. This is a legal requirement under the Wildlife & Countryside Act 1981.

SONIC SCARING

Target species-starlings. A bio acoustic dispersal system with a mixture of alarm and distress calls over a carefully scheduled time programme to break the roosting habits of the birds and move flocks of starlings from buildings or locations and away to less sensitive areas.

REDUCING BIRD POPULATIONS

Many situations call for more conclusive measures. We can provide other solutions:

LIVE TRAPPING

The strategic placement of live cage traps is used to remove unwanted birds humanely over a period of weeks. Discretion in use is guaranteed.

MIST NETTING

A special trapping technique used only when there is no alternative and usually to tackle house sparrows within a food warehouse/factory environment. Our licensed technicians work to MAFF guidelines.

NARCOTISING

The birds are encouraged to eat food mixed with a narcotic drug which causes deep sleep. Then the birds are picked up and dispatched humanely. If any protected bird takes the bait it is revived and released. This is the only legal method of controlling birds by the use of chemicals. It may be carried out only by personnel licensed by MAFF.

SHOOTING

This is sometimes the only feasible control method for individual birds or small flocks. Crystal Environmental marksmen are trained to carry out this service quickly and professionally.

GULL NURSERY CLEARANCE

This involves the physical removal of nests, eggs and fledgings, to combat extreme cases of aggressive gulls nesting on or around buildings.

FOULING CLEARANCE

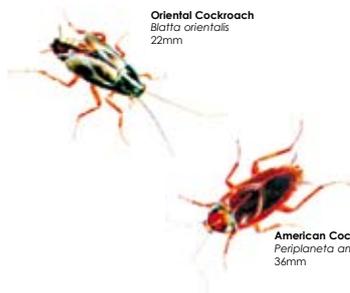
This is the removal of accumulated droppings, carcasses and nesting material hygienically and without risk to health.

All measures deployed have been carefully chosen to be effective, yet unobtrusive and whenever possible to leave bird life unharmed and are in strict accordance with MAFF and RSPB guidelines.

Insect Pests

Insects are the most abundant of all land animals and have inhabited every environment except the sea.

COCKROACHES



Cockroaches are among Earth's most ancient creatures, surviving floods, fire, famine and nuclear tests. They can live a month without food and two weeks without water, so that reinfestation is always a significant risk. Nocturnal, Cockroaches spend the day hiding in cracks and crevices around sinks, drains, cookers, backs of cupboards and refrigerator motor compartments, They are vectors of disease such as dysentery, gastro enteritis, typhoid and poliomyelitis. Their diet includes fermenting substances, soiled septic dressings, hair, leather, parchment, wallpaper, faeces and food for human consumption. Cockroaches are also cannibalistic so that where there are no food sources present they will eat each other.

WASPS & ANTS



In addition to carrying disease, death through **wasp** stings in the throat account for 50% of all fatalities caused by venomous animals. They feed on fruit eg. apples, pears and plums although they are regarded as scavengers, extending the damage caused by other pests and diseases. The need to collect wood to construct nests means that wasps may damage the wooden fabric of buildings, fences and even perhaps garden furniture.

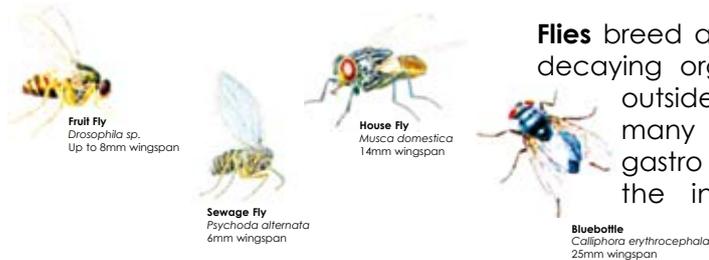
Black Ants cultivate greenfly and may damage food used for human consumption.



Pharaoh's Ants feed on meat, cheese, fats, sugar, honey, jam, chocolate and blood. Pathogenic organisms may be transmitted mechanically as the ants feed in unhygienic places including drains, refuse bins and wound dressings. Colonies range from a few dozen to 300,000 ants.

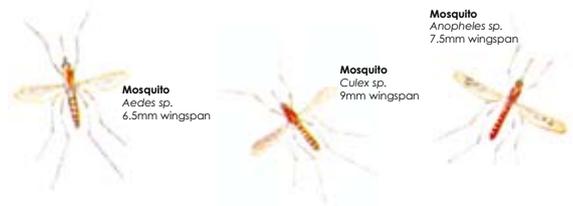


FLIES & MOSQUITOS



Flies breed and feed in unsanitary conditions where larvae feed on decaying organic matter. Contamination agents survive on the outside body, gut and blood system. Diseases caused include many lower respiratory and urinary tract infections and acute gastro enteritis type complaints. Fly spotting, produced when the insect feeds or defecates, results in rejection of contaminated farm produce, eg. eggs, at point of sale.

Mosquitos are primarily a seasonal biting nuisance in cooler climates. They can transmit many diseases including malaria and yellow fever.



BITING INSECTS



Bed bugs are not regarded as disease carriers, but their blood feeding can cause severe irritation in some people, particularly in children. Access between buildings, heating and the movement of furniture and travel bags all serve to maintain population levels. Bed Bug excrement gives a characteristic speckled appearance to their harbourages, whilst their 'stink glands' confer a distinctive and unpleasant almond like smell in infested rooms.

Fleas can be vectors of disease or may transmit parasitic worms. Social stigma and psychological problems may arise with the induction of delusory parasitosis, in which the victim imagines he is infected with ectoparasites. The **Dog Flea** is an intermediate host of the Dog Tapeworm. Cat Fleas are now responsible for over 75% of all flea infestations.



STORED PRODUCT INSECTS

A large number of different species compose the SPI. Damage is caused by larval and adult stages of beetles and mites and generally by the larval stages only of moths. The insects can survive for long periods of time on minute residues of food in cracks in the building fabric thereby constituting an important source of reinfestation.

Lesser Grain Borer
Rhyzopertha dominica
3mm



Warehouse Moth Larva
Ephesia elutella
12mm

Warehouse Moths are a major pest of warehouses and more recently retail premises. Infestations are especially serious where wheat and flour are stored in bulk.

Damage is caused by the **Larder Beetle** larvae which bore holes in materials, either as they feed or in order to pupate. The soft sapwood of wooden structures are preferred pupation sites.



Larder Beetle
Dermostes lardarius
8mm



Biscuit Beetle
Stegobium paniceum
2.7mm



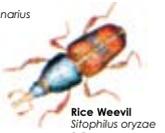
Powder Post Beetle
Lycius brunneus
4.3mm

Biscuit Beetles are a pest of cereal products. There have been reports of it infesting poisonous substances such as strychnine belladonna and aconite. The larvae causes damage to packaging and products and can burrow through solid materials such as tin foil and sheet lead.

Grain and hard cereal damage by **Grain Weevil** include larvae feeding, dusty excreta causing tainting and heating up of the grain, accelerating development of the insect, making the commodity liable to caking, moulding and even germination.



Grain Weevil
Sitophilus granarius
3.5mm



Rice Weevil
Sitophilus oryzae
2.5mm



Confused Flour Beetle
Tribolium confusum
3.5mm

Confused Flour Beetles are generally recognised as secondary pests, causing flour to become prone to moulding and they taint commodities with secretions from scent glands.

Indian Meal Moths are a problem of the fruit-drying industry, also attacking cereals, oil seeds and shelled nuts. Larval webbing may occasionally reach problem proportions.



Indian Meal Moth
Plodia interpunctella
12.5mm wingspan



Saw-toothed Grain Beetle
Oryzaephilus surinamensis
3mm



Mealworm Beetle
Tenebrio molitor
16mm

Saw Toothed Grain Beetle infest cereal products, dried fruit, dried meats, oilseeds, nuts, rice and even drugs. The germ may be damaged leading to grain caking, moulding and even sprouting.

Australian Spider Beetle larvae infest all manner of dry animal and vegetable matter. The larvae bore holes in which to pupate, and in doing so may damage packaging or the commodities themselves. They also contaminate commodities with droppings and silk webbings, and are commonly associated with the bird's nests from which it may invade food premises.



Australian Spider Beetle
Ptinus tectus
3.2mm

TEXTILE PESTS



Brown House Moth
Hafmannophila pseudospretella
8mm

Brown House Moths attack a wide variety of materials including cereals, cereal products, textiles, leather and cork. The Brown House Moth tends to scavenge whilst the White Shouldered House Moth is generally found infesting food.

Damage takes the form of clean, irregular holes and in the textiles these generally occur around seams. There is no webbing or excrement present and by the time the larvae are observed, considerable damage has often been done by the **Varied Carpet Beetle**.



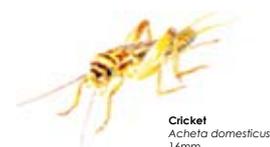
Varied Carpet Beetle
Anthrenus verbasci
3mm



Carpet Beetle Larva
Anthrenus verbasci
4.5mm

Carpet Beetle digest the protein keratin which is the principal constituent of fur, feathers and the wool used in the manufacture of clothes, upholstery, fabric, carpets, under felts and blankets. The larvae feed on all materials, clothes and textiles of animal origin.

CASUAL INTRUDERS



Cricket
Acheta domestica
16mm



Silverfish
Lepisma saccharina
12mm



Earwig
Forficula auricularia
17.5mm

These cause little actual damage but their presence may cause stress or anxiety and feelings of revulsion.

Flies cannot eat solid food, so to soften it up they vomit on it. Then they stomp the vomit in to form a liquid, adding a few germs for good measure. After this they suck it all back up again, dropping some excrement at the same time. And then when they've finished eating-it's your turn. The habits of wasps are just as unsavoury as those of flies and they can carry disease in much the same way. In addition, wasps are attracted to fruit and pastries and can be caught up in these and eaten.



ELECTRONIC FLY KILLERS

24 Hour protection against flying insects can be provided for rental or supply and service. Once electrocuted the fly falls into a collection trap, which should be emptied regularly as part of routine maintenance.

Electronic fly killers are often the last line of defence or the only means of control. When used for monitoring purposes, their role is equally critical. Maintenance of proper effectiveness is essential. All Crystal EFKs are designed to be simple to maintain and clean, and for maximum efficiency. The tubes should be changed at least once per year since the phosphur coating, which produces the UV, deteriorates with use.



LIGHT TRAPS

Another type of trap uses the same attraction lights as electronic fly killers but does not electrocute the insect, instead, trapping it on a sticky board.



Operating Policies

EQUAL OPPORTUNITIES

Crystal Services plc is an equal opportunities employer and dedicated to the creation of an entirely non-discriminatory working environment. The aim of our policy is to ensure that no job applicant receives less favourable treatment on the grounds of their sex, disability, race or creed.

ENVIRONMENTAL POLICY

Crystal is committed to the provision of services and products which improve the quality of life for its customers and the community using working practises designed to protect the environment.

HEALTH AND SAFETY

The Group recognises and accepts the responsibility to provide and maintain safe working conditions and healthy environment for all its employees and any other persons affected by its activities. Our policy is to ensure that the Group fully complies with Health & Safety and Environmental legislation.

Why Pest Control?

- They cause damage
- They cause fear
- They contaminate products
- They upset work procedures
- They cause disease
- They can lead to prosecution
- They cause loss of goodwill
- Inadequate or poor pest control can lead to fines or even imprisonment



National Pest Technicians Association

