



Protecting the
urban environment

Bird Free installation manual.



Since its introduction into Europe in 2011, *Bird Free* optical gel™ has been successfully installed at thousands of sites throughout the continent. During this time, *Bird Free* has proved to remain effective (without the need for maintenance) for a minimum of three years. It has proved effective at preventing birds from returning to long-standing nesting sites (high pressure), as well as at medium- and low-pressure sites. As explained below, the dishes of optical gel must be fitted at spacings commensurate with the pressure.

Cleaning the site prior to application of *Bird Free* optical gel

It is essential to clean the application site of all nests, faeces and other organic debris before *Bird Free* is applied. (Failure to do so will compromise efficacy.)

Routine cleaning of droppings where there are no nests or major accumulation of faeces (e.g. from window sills) can be done with scrapers and wire brushes. Simple precautions to reduce direct contact with droppings, such as wearing disposable gloves and clothes that can be washed, should be taken.

When cleaning long-standing nesting or night roosting sites where there is a major accumulation of faeces, full PPE, including masks, should be worn. Precautions should be taken to ensure that members of the public are not exposed to airborne dust or other debris. Surfaces should be wetted with biocide or water mixed with detergent where faeces are present to limit generation of airborne dust and aerosol mists during cleaning. If a pressure washer is used, dust and aerosol control measures, such as containing the area with plastic sheeting, should be taken. Alternatively the wetted faeces and debris can be removed with a shovel. The wet material should be collected in heavy-duty plastic bags, or some other type of secure container, and discarded with rubbish.

Fixing the dishes of optical gel

Remove covers from dishes and affix dishes to dry surfaces, in accordance with spacing guidelines below, with silicone or other removable adhesive.



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Spacing of optical gel dishes for feral pigeons

General guidelines to spacing of dishes for feral pigeons are as follows (all spacings are centre to centre):

Low pressure (day roosts): 10"

Medium pressure (night roosts): 8"

High pressure (nesting sites): 6"

Installations shown below are intended to provide further guidance.

Low pressure examples

To stop pigeons from sitting on the front of a ledge (perhaps one overlooking a food source) and fouling below, one row of dishes should be fitted with silicone at 10" centres after proper cleaning. If the birds are sitting on the leading edge the dishes can be fitted 1" behind the leading edge so that they are invisible from below. Dishes should be fitted end to end into corners.



If the ledge is more than 10" deep, and there is nesting/night roosting in the immediate vicinity of the ledge, two rows of dishes should be applied. Dishes should always be fitted right into the corners of the ledge as birds favour the sheltered corners.



Low/medium pressure examples

In the example shown below, pigeons were night roosting on the upper parts (medium pressure) of the delta-shaped rafters and day roosting (low pressure) on the lower parts.



The rafters were first cleaned. Dishes of *Bird Free* were then fitted to the upper parts of the rafters at 8" centres (below left), and to the lower part of the rafters at 10" centres (below right).



Medium/high pressure examples

For nesting/night roosting sites, spacing of dishes is 6" for nests (below left), 8" for night roosts (below right).



High pressure examples

Where nests are removed the dishes should be fixed at no more than 6" centres. Skimping on the number of dishes is a false economy. If the birds are not prevented from returning to nests the whole job will be compromised.



In the urban environment, wherever there are sheltered areas not frequented by humans, pigeons will tend to set up home. In the case shown below, pigeons were nesting in courtyards on the ground floor because these were unused. Artificial grass may be used as a substrate.



Pigeons nesting in the corner of balconies is a common problem. In this case, the nest must be removed and four dishes fixed in a square at 6" centres where the nest was.



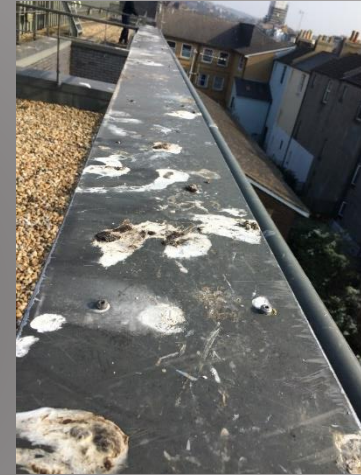
Inaccessible sites

With any bird control treatment it is essential to prevent the birds from returning to their nesting sites. The nesting site itself must be treated. Applying *Bird Free* around the periphery of a nesting site which has not been treated will not deter birds from returning to untreated nests. If the nesting site is inaccessible it will need to be blocked off.



Spacing of dishes for gulls

When treating gull-infested rooves with *Bird Free* optical gel spacing of dishes will, again, depend on the level of pressure. In the example shown below, dishes were fixed to the heavily fouled sections of the roof at 10" centres.



Less fouled sections were treated with dishes at 16" centres.



Extra dishes should be fitted to corners used by gulls as observation points.



Where gulls have previously nested, or are likely to nest, dishes should be fitted to half bricks, as shown below. Where a colony of gulls has been nesting on the roof for many years, we recommend fortnightly visits during the first nesting season after treatment with optical gel, during which nests built in untreated parts of the roof should be removed and treated.



Spacing of dishes for other bird species

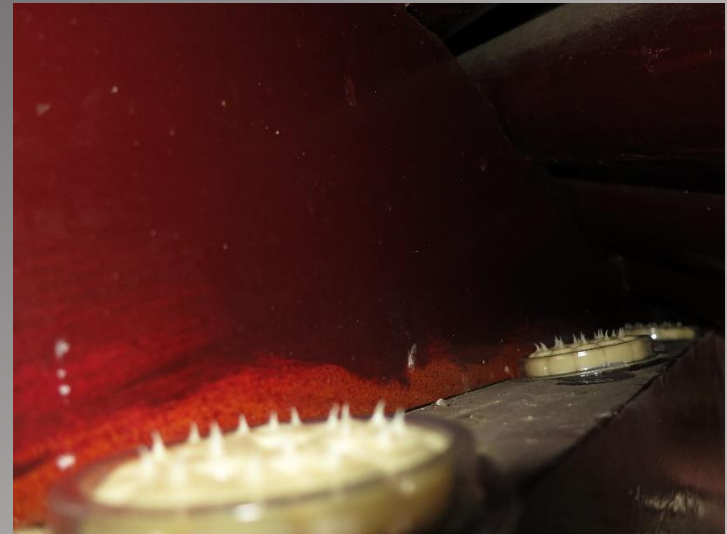
In addition to pigeons and gulls, optical gel has proved effective against many species of bird, including sparrows, swallows, starlings and corvids (crows, rooks, magpies, jackdaws, etc). Recommended spacing of dishes is as follows:

Sparrows and swallows	6"
Starlings	8"
Corvids	10"

Bird Free stops swallows from nesting below eaves.



Bird Free stops sparrows from nesting in Mannheim, Germany.



Bird Free stops crows from roosting on silo (below left). *Bird Free* stops magpies from pecking putty from window (below right).

