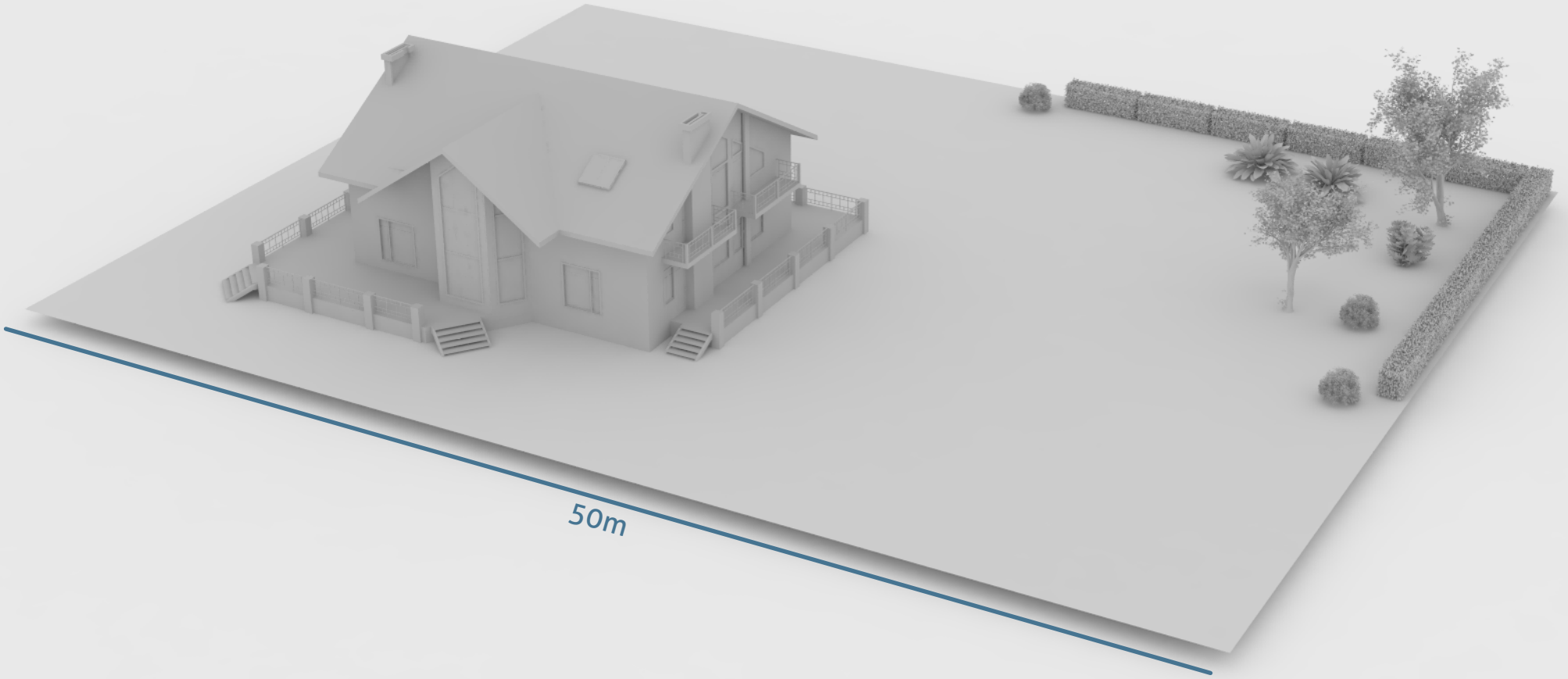
Science for Your Protection

Placement and effects of Biogents mosquito traps

Biogents



The virtual property shows a single family house with garage and a garden that is structured differently: a large lawn area and an area surrounded by several bushes, trees and shrubs. The slightly unnatural division of the garden helps to illustrate the basic principles of this control method.

The resident sits in front of the terrace in the garden and wants to enjoy his garden in peace.

However, he is harassed by many mosquitoes as soon as he enters the garden. If doors or windows are open, the searching mosquitoes also enter the house and are particularly annoying at night in the bedrooms.

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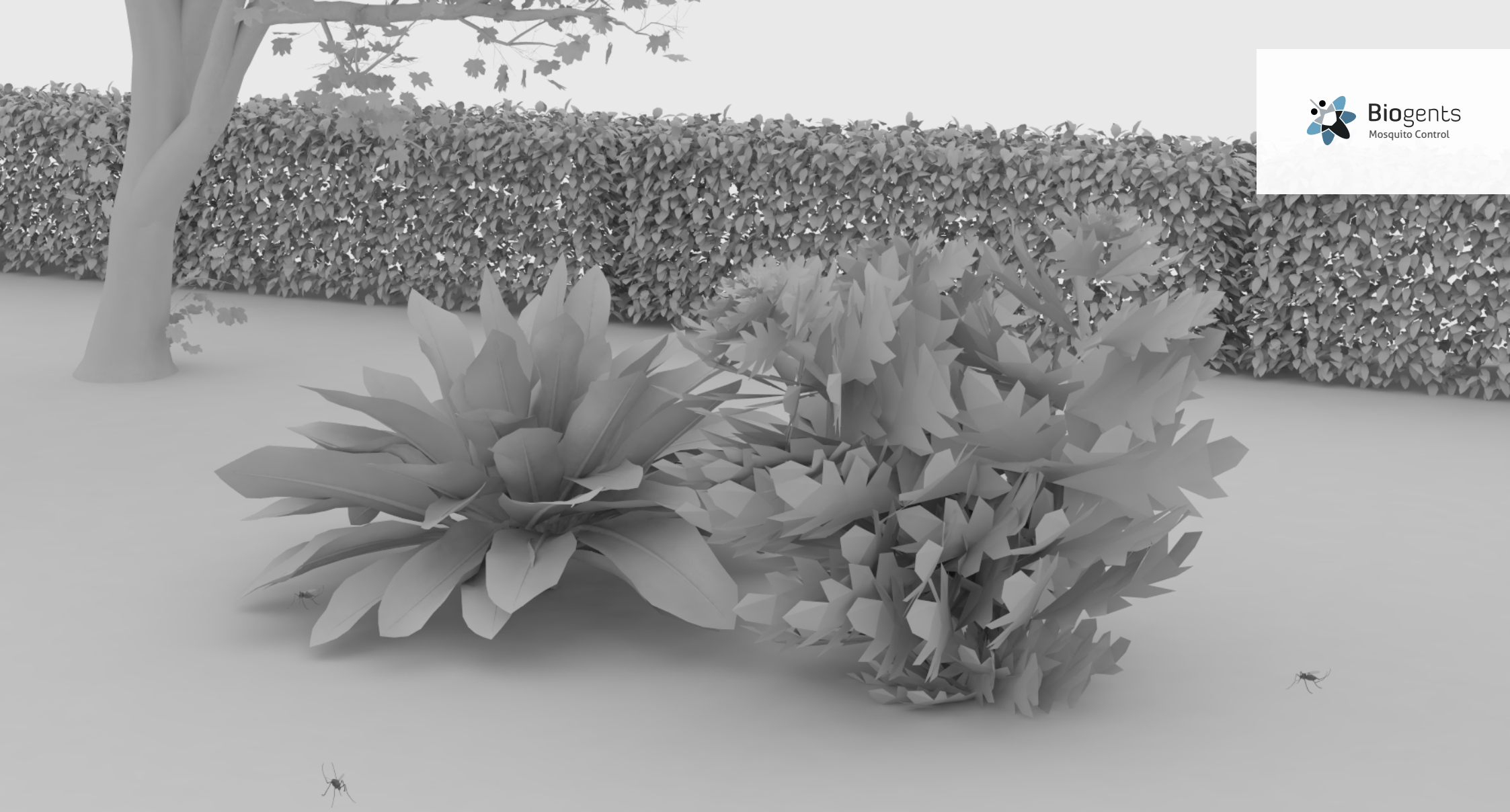
Where do the mosquitoes come from?

Mosquitoes are relatively filigree insects and they need to protect themselves from dehydration. Therefore, they mostly avoid direct sunlight and wind. Shady, sheltered places with high humidity are their favorite resting places.



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Plants with leaves such as shrubs, bushes, hedges or trees provide excellent protection and thus are the preferred places for resting mosquitoes, especially in areas close to water such as ponds, lakes or rivers, where the humidity is high.

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The mosquitoes hide during the day or night in the plants, especially under the leaves. In this way they are hardly visible, well protected from sun and wind and the moisture given off by the leaves is ideal for mosquitoes. From time to time the mosquitoes start to search for animals and humans to obtain a blood-meal. In general, they do not fly over long distances of more than 50m or 100m and stay close to their shelters. On a plot the mosquitoes are usually not evenly distributed. There are so-called „mosquito nests" with a higher density of adult mosquitoes, where the mosquitoes spend the most time.

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The Biogents mosquito trap is best placed in the immediate vicinity of such mosquito nests. The trap attracts the mosquitoes from the environment and captures them. Thus, the mosquitoes will be caught before they annoy humans.
The trap should run constantly 24h per day over a long period.

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The catchment area of the trap depends primarily on wind direction and many other factors, but is usually not more more than a 20m radius. This is intentional, because no one wants to invite more mosquitoes from a distance in his own garden. It is therefore very important to place the trap in the vicinity of the mosquito nests. This increases the probability of catching and makes sure that as many mosquitoes are caught as possible. Beneficial insects are not attracted to the trap and will remain in the ecosystem. Therefore, this control method is very environmentally friendly.

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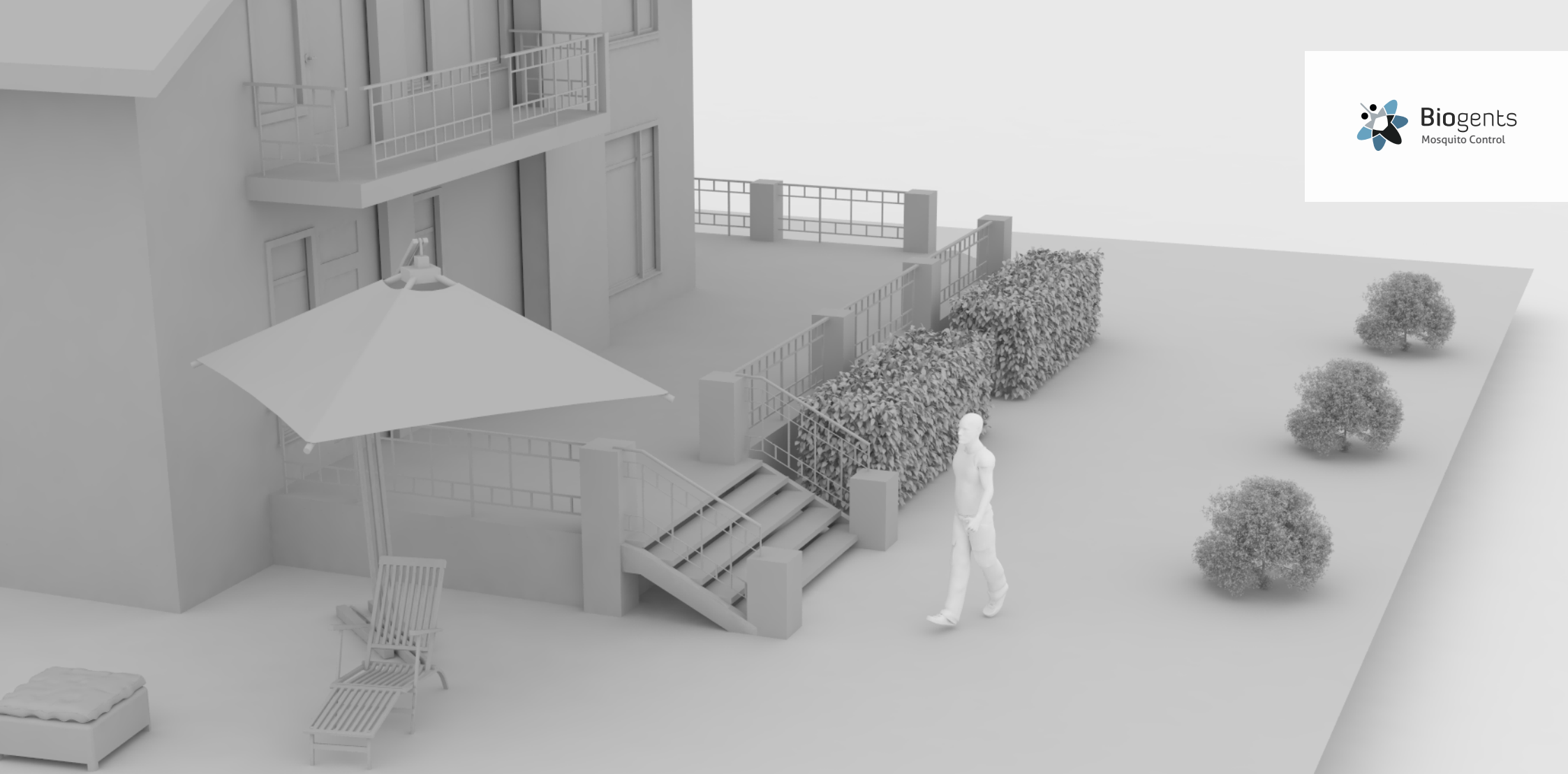
After a few days the mosquito nests are thinned out by the presence of the trap. On the whole plot the mosquito density decreases and the harassment decreases also noticeably. However, a 100% protection is never guaranteed by this method because of the high mobility of the flying mosquitoes.

Scientific studies show a decrease in mosquito bites outdoors by up to 90% if a sufficient number of traps are placed correctly.The mosquitoes caught in the trap can not reproduce themselves and will not produce offspring. This also leads to a decrease of the mosquito populations over the long-term.



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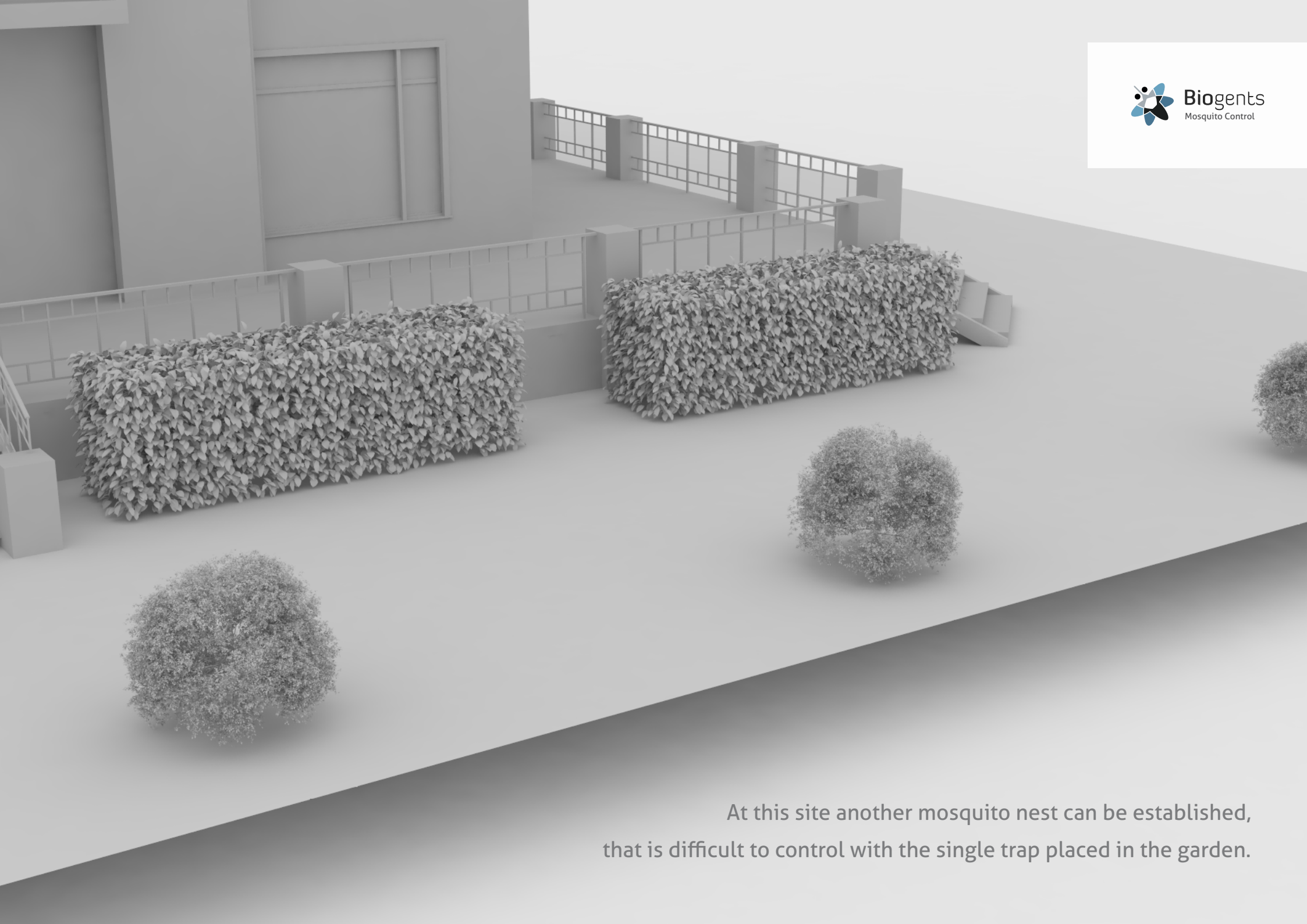
A look behind the house shows a hedge that stands along the front wall of the house. This hedge could also be a shelter for the mosquitoes. However, this hedge is outside the catching range of the trap.



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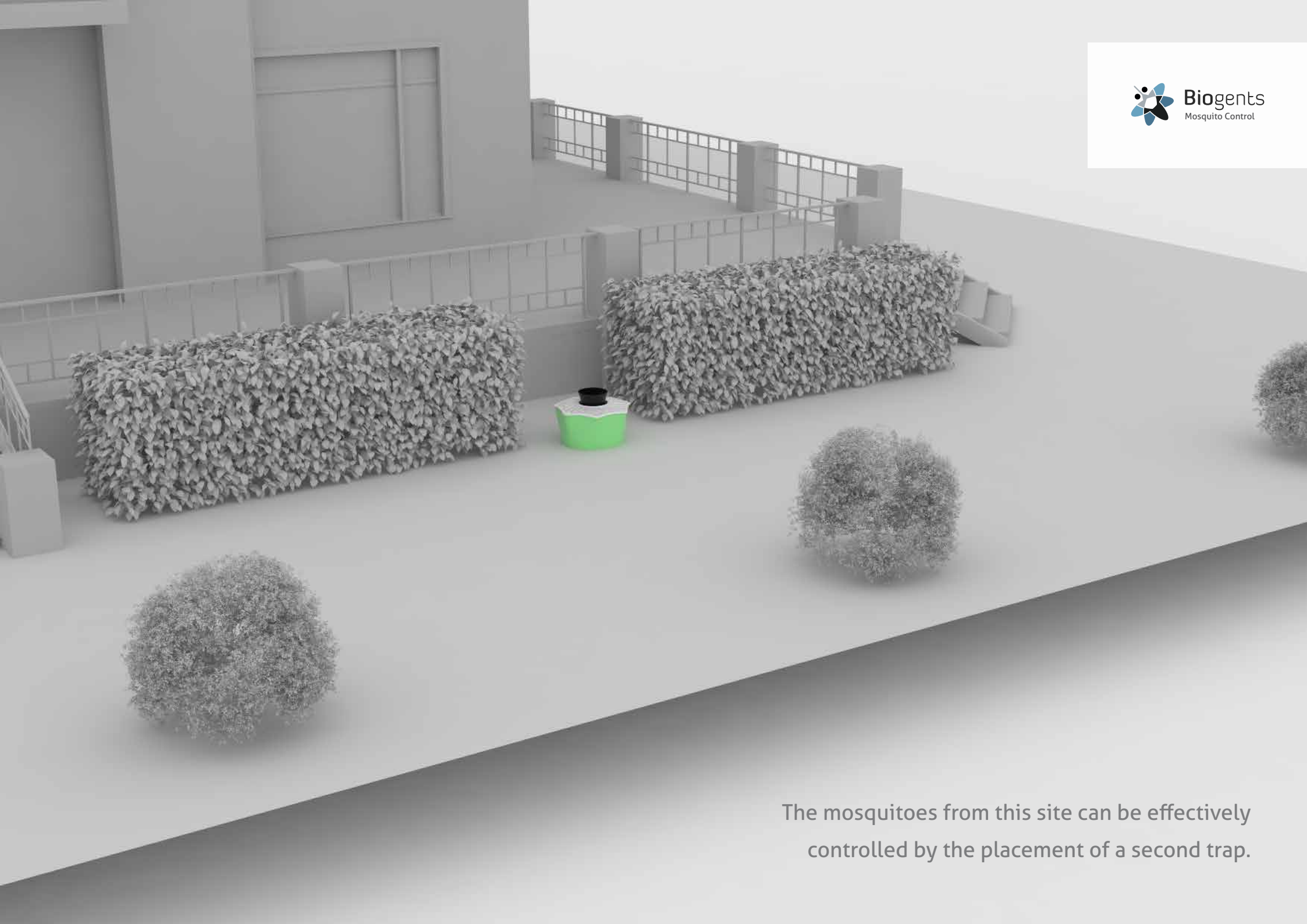
At this site another mosquito nest can be established,
that is difficult to control with the single trap placed in the garden.



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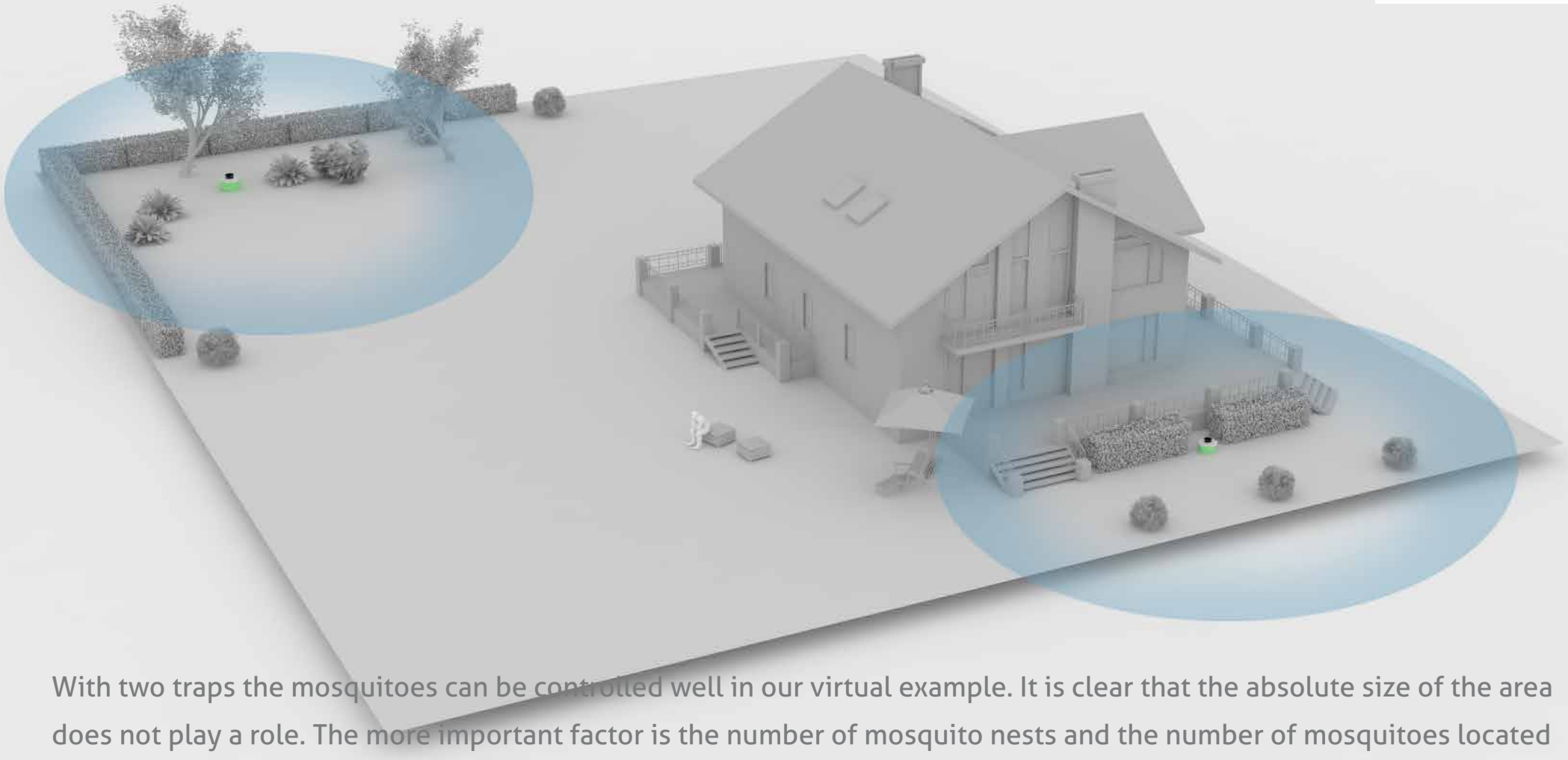
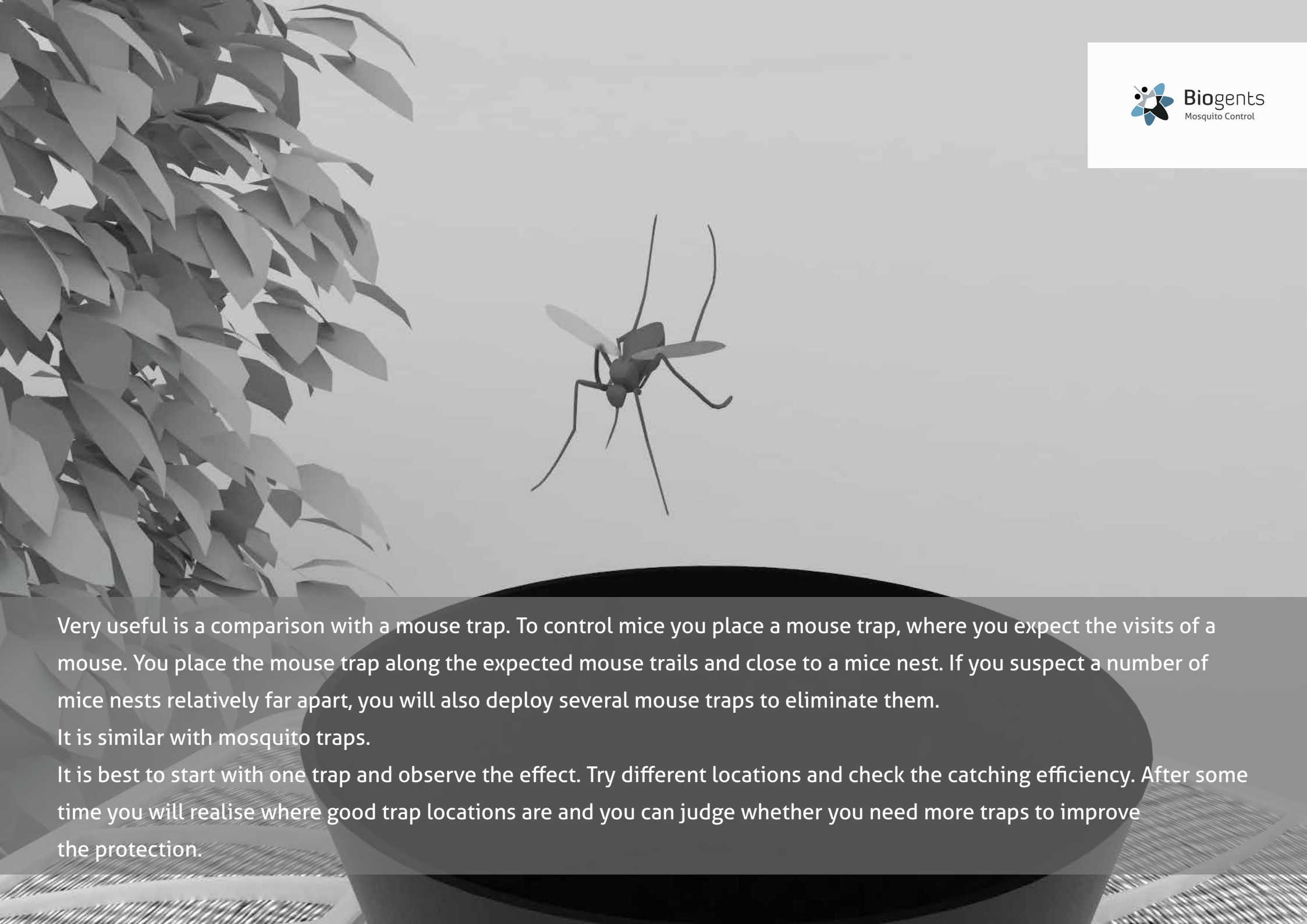
The mosquitoes from this site can be effectively controlled by the placement of a second trap.



With two traps the mosquitoes can be controlled well in our virtual example. It is clear that the absolute size of the area does not play a role. The more important factor is the number of mosquito nests and the number of mosquitoes located therein. If many mosquitoes have accumulated or the mosquito nests are too far apart, more than one trap must be used simultaneously and the trap positions need to be changed frequently. As the situation varies from property to property, there is no simple rule to estimate the number of traps that are required to protect a certain area.



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Very useful is a comparison with a mouse trap. To control mice you place a mouse trap, where you expect the visits of a mouse. You place the mouse trap along the expected mouse trails and close to a mice nest. If you suspect a number of mice nests relatively far apart, you will also deploy several mouse traps to eliminate them.

It is similar with mosquito traps.

It is best to start with one trap and observe the effect. Try different locations and check the catching efficiency. After some time you will realise where good trap locations are and you can judge whether you need more traps to improve the protection.