



**PHILIPS**

Nieuwkoop,  
the Netherlands

Public lighting

# Bat-friendly night-time lighting

## Lighting that does not disturb nocturnal animals

To ensure that its population of rare bats is not disturbed by its new housing program and associated artificial lighting, the municipality of Nieuwkoop in the Netherlands installed streetlights with specially designed color and wavelength in the Zuidhoek area. The lights have no impact on the normal nocturnal behavior of bats, while ensuring good visibility for residents. The overall lighting solution also includes light management software that enables real-time, remote management of light points so that artificial light is only used when required.

## A valuable natural habitat

Thanks to its many rare and vulnerable animal and plant species, Zuidhoek in the municipality of Nieuwkoop in the Netherlands is part of the Natura 2000 network. The aim of the network is to ensure the long-term survival of Europe's most valuable and threatened species and habitats.

After decades of operating as a camp site, where people came to enjoy the location and nature, in 2011 the municipality decided to convert Zuidhoek into a residential area by building 89 houses. Prior to construction work starting, the municipality was obliged to assess the environmental impact of the housing program. This involved conducting a study of the flora and fauna of the area to see if any special nature conservation measures might be necessary.

The outcome of the research showed that it is an important feeding area for some rare bat species. Therefore, before proceeding with the housing program, they had to put some conservation measures in place. This had to include lighting that would not disturb the nocturnal feeding and night-time activity of the bats. For that reason Nieuwkoop selected the dedicated light recipe developed through extensive research by Philips Lighting, the University of Wageningen and NGO's active in the field. Both the color and the wavelength were designed to ensure bats can enjoy the night time as if there was no artificial lighting in place, while ensuring good visibility for residents living in the area. Therefore no compromise was made on safety.

“With the lighting design, the overall objective was to increase the quality of the darkness and **I wanted to find the best light source to achieve that.**”

Robert Jan Vos, Lighting Design Consultant

## An integrated, cohesive concept

In addition, the new residential area had to follow strict regulations in terms of architecture and look & feel. It had to blend into the existing landscape from an esthetic point of view. And it had to meet the nature conservation objectives. The lighting plan for the residential area was designed by independent lighting consultant Robert Jan Vos.

“The key aspect of the project was to create a natural landscaping concept in which the housing program does not impact local wildlife.”

Robert Jan Vos, Lighting Design Consultant

To further encourage citizens to embrace the concept of wildlife protection, they distributed light bulbs incorporating the same light recipe to residents, that they could place in their gardens.

## Higher efficiency through remote management

To further optimize light levels, the municipality installed the Interact City remote light management system to ensure that light is only on when it's needed. They can now use the scheduling function and set up an annual dimming calendar. The software also enables the municipality to become more proactive in terms of fault detection and maintenance operations. Moreover, it allows fast response to citizen complaints, for example if the brightness of a certain fixture needs to be reduced. Following the successful implementation of the system in Zuidhoek, the municipality is planning to extend it across other areas of Nieuwkoop.



### Creating a livable space for all inhabitants

The new lighting solution ensures bats living in the area are not disturbed by the color and wavelength of artificial lighting. At the same time it provides good visibility and an optimal sense of safety for residents.



### Fully compliant with nature conservation objectives

The application of the dedicated light recipe supports the municipality's housing program in Zuidhoek while enabling the creation of an ideal infrastructure that complies with the directives of Natura 2000.



### Maximum flexibility and optimized efficiency

Enabled by the Interact City lighting management software, the municipality has complete flexibility to set up dimming schedules and an annual dimming calendar. These ensure that artificial lighting is only used when it's needed, thereby optimizing energy efficiency.



### Operational excellence

Also thanks to the Interact City lighting management software, the municipality can now proactively respond to citizen feedback on the lighting, easily adjust dimming levels of individual fixtures, and perform proactive maintenance.

## Nieuwkoop: Living with nature

Nieuwkoop is a municipality in the province of South Holland, the Netherlands. It has a population of around 28,000. Its Zuidhoek area is part of the Natura 2000 network of valuable natural habitats.

## Fast facts

**Customer:** Municipality of Nieuwkoop

**Location:** Nieuwkoop, The Netherlands

**Systems & products:** Dedicated bat-friendly light recipe, Interact City remote management software.

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