VISSERS PLOEGMAKERS Aannemingsbedrijf

INTERFILTER HVAC

CASE STUDY

VISSERS PLOEGMAKERS - NOX FILTERBOX 2.0

NITROGEN DEPOSITION REDUCED FOR NATURA 2000 AREA!

Contractor Vissers Ploegmakers delivers complex and integrated solutions in civil engineering, road construction, and water management. One of their projects is the Peelkanalen in the Deurne Canal and the Helenavaart, commissioned by the Water Authority Aa and Maas. This includes dredging, maintenance of embankments, modifications to structures, and restricting access to the eastern embankment of the Deurne Canal. These activities took place in 2022, largely within the Natura 2000 area Deurnsche Peel & Mariapeel.

Nitrogen Deposition in Natura 2000 Area

It was initially determined that nitrogen emissions would occur during the aforementioned activities. Nitrogen emissions lead to a temporary increase in nitrogen deposition within the Natura 2000 area Deurnsche Peel & Mariapeel. This deposition can cause soil acidification and mineral deficiencies, leading to a loss of biodiversity. Due to the necessity of the project, no permit under the Nature Conservation Act was required. However, Vissers Ploegmakers was committed to preventing any negative effects on the nature reserve. "*Our goal is to minimize the negative impacts of nitrogen deposition in Natura 2000 areas as much as possible*," said Ron de Mol, project manager at Vissers Ploegmakers. Calculations showed that it would be practically impossible to carry out the necessary work without increasing nitrogen deposition. The question then arose: What target value could be used to reduce or even prevent the increase in nitrogen deposition?

Towards 0.0 Emissions

Vissers Ploegmakers commissioned an investigation into whether nitrogen deposition could be reduced using the NOx Box 2.0 developed by OC Verhulst and Interfilter. "*Our filter box was developed to capture NOx from the outside air*," explained Ben Lamens, consultant at Interfilter HVAC. Thanks to the use of just one Interfilter NOx Box 2.0 during the 12-month project, the highest calculated deposition of 0.31 mol/ha/year in a hexagon in the Natura 2000 area was reduced to 0.13 mol/ha/year. Additionally, the use of the filter box reduced the number of hexagons with an increased nitrogen deposition of 0.10 mol/ha/year from eight to just two. "*The Interfilter NOx Box 2.0 ensures that Vissers Ploegmakers can work in an environmentally friendly manner within the Natura 2000 area Deurnsche Peel & Mariapeel.*"

NOX FILTERBOX 2.0 IN NATURA 2000-AREA