



## Case Study



### Property Owner

Ahold Delhaize



### Main Contractor

Stamhuis België



### Architect

Polo. architects



### Acoustic Consultant

EVA-International

## OVERVIEW

In some multi-functional buildings, supermarkets are located under an apartment block which, if not isolated, may cause serious noise nuisance for the occupants. In particular, the rolling noise of pallet trucks is clearly audible as it is easily transmitted via the floor and as most of the loading and unloading activities are planned early in the morning or late in the evening, when background noise levels are very low, this is obviously of particular concern when designing the building.

The main strategy of acousticians and architects to prevent this kind of noise nuisance is to decouple the entire floor of the supermarket and unloading areas by using a continuous mat isolation solution.

## Stravifloor Mat

- Low-profile roll-out isolation solution
- Economic structure-borne noise protection
- Can be used with gypsum, lightweight, or normal weight concrete without the need for formwork

**3000 m<sup>2</sup>**  
Stravifloor Mat



## SOLUTION

For the Delhaize project about 3000 m<sup>2</sup> of floor have been decoupled by using a resilient recycled rubber mat with a wavy surface ([Stravifloor Mat](#)). In critical zones like the unloading area the applied mat solution was adapted to provide extra acoustic isolation. A floating reinforced concrete floor was then installed on top of the mat. Lateral decoupling of the loadbearing walls, columns, and services running through the floor was achieved by using Perimeter Strips which were meticulously installed to avoid all possible bridging.

CDM Stravitec specifically developed for rolling noise isolation applications a full range of wavy surface mats ([Stravifloor Mat](#)), based on DLv,rn index. This new concept is used in France and based on an extended frequency range of 50 to 500 Hz, for better evaluation of the low frequency response and performance. The [Stravifloor Mat](#) has a profiled underside thereby minimizing contact points across the floor and reducing the structure-borne noise transmission to the supporting structure of the building whilst still providing a low resonance frequency for the floor system. The high density of the chosen [Stravifloor Mat](#) means a long-term warranty of the physical and acoustic performance of the system can be provided as the effects of creep are of no importance. Low density resilient mats are known to suffer from creep leading to reductions in elasticity and noise isolation performance in the long term.

## AT A GLANCE

### CHALLENGES

- Multiple critical zones like the unloading area needed extra attention/isolation
- Lateral decoupling of the loadbearing walls, columns and services

### BENEFITS

- Quick & easy installation
- Available in various thicknesses
- Great level of impact noise reduction with minimal system thickness
- Cost-effective solution

