

**SCHÜTTE**

LÄRMSCHUTZ SYSTEME

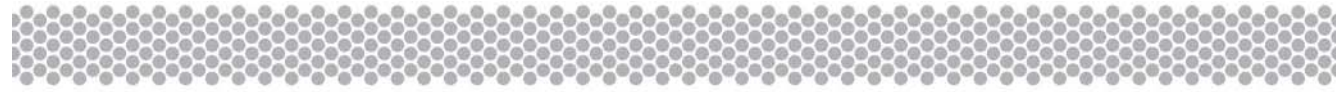
# Environmental Noise Conference 2010



**Requirements of Noise Barrier Standards**

**Testing Results**

**Health Effects**



**SCHÜTTE**

LÄRMSCHUTZ SYSTEME

## Who we are

Mr Gerd Heltriegel

Managing Director

Mr Adam Drozdzyński

Sales Manager - Noise Protection

Team of experts for noise protection

Competence and experience in engineering

Partner of public authorities, architects, railways and industry

# International



International supplier for road and railway noise protection

Member of international networks

Exchange of experiences

# A strong partner in business

German market leading company

Over 3 million m<sup>2</sup> of Schütte noise protection in Europe and the world

Specialist for customised solutions

Full-line product portfolio for aluminium and glass elements

CE certification “Made in Germany” according to EVS-EN 14388:2007

Highly flexible and sophisticated distribution channels

Complete solutions from statics to planning to implementation



## Health Effects of Noise

**SCHÜTTE**  
LÄRMSCHUTZ SYSTEME

Sleep well!  
40% less noise

□

**High-End Protection!**

Rail approved  
*Speedbarrier* V300  
21dB Absorption  
Insulation 38dB (Rw)

**SCHÜTTE**  
LÄRMSCHUTZ SYSTEME

**We** take care of your health

# Testing standards of Aluminium Noise Barriers

**CE certification according to EVS-EN 14388:2007**

**Sound insulation - DIN EN ISO 140-3 / 1793-2**

**Acoustical absorption - DIN EN ISO 354 / 1793-1**

**Stone impact - DIN EN 1794-1**

**Snow loads - DIN EN 1794-1**

**Stability test**

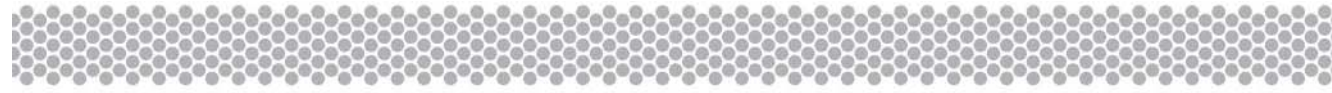
# Testing standards of Glass Noise Barriers

**Hammer test** - DIN EN 1794-2

**Stone impact** - DIN EN 1794-1

**Fire resistance** - DIN EN 1794-2

**Stability test**

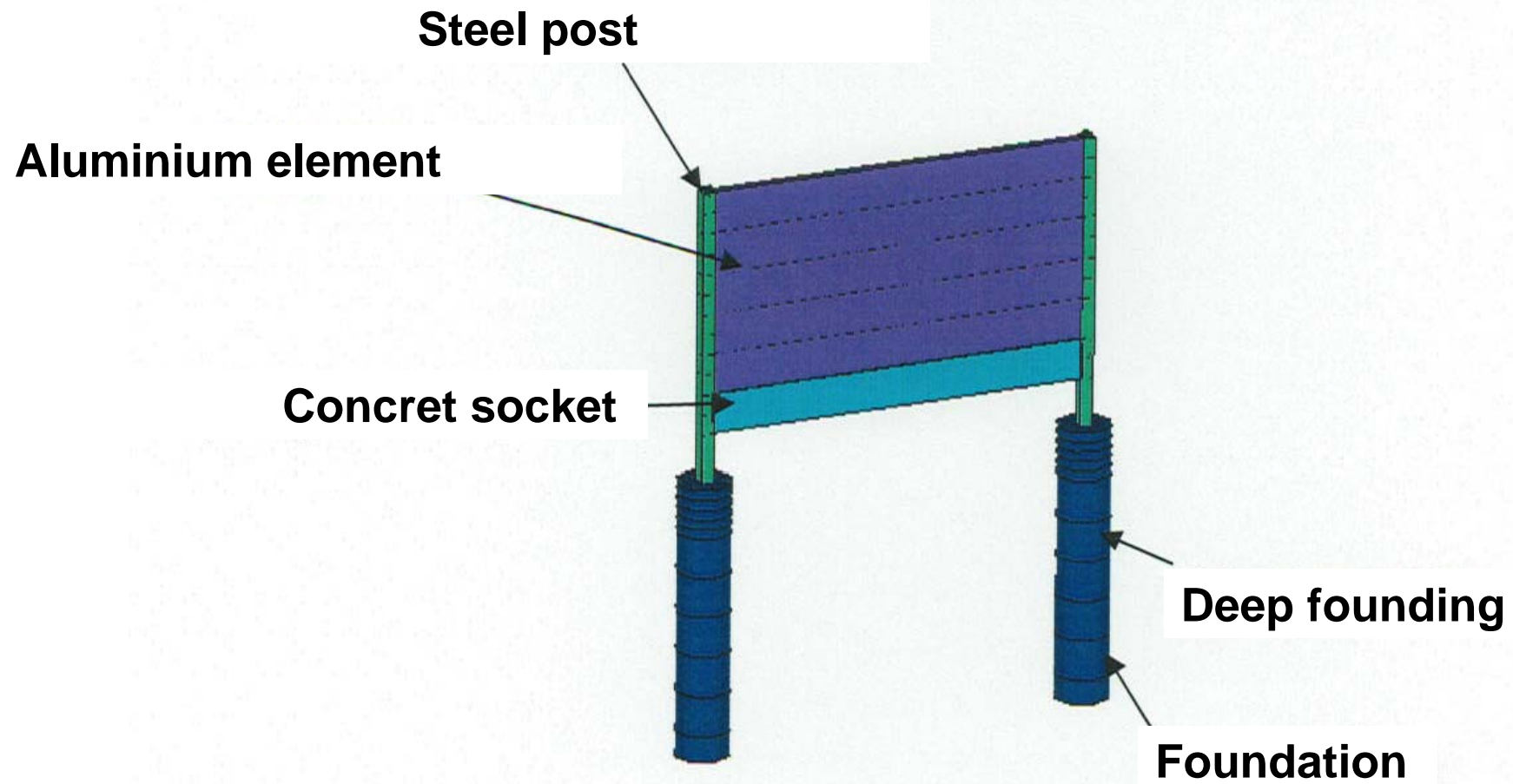


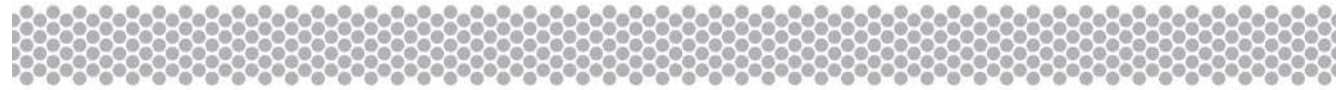
# Hammer test



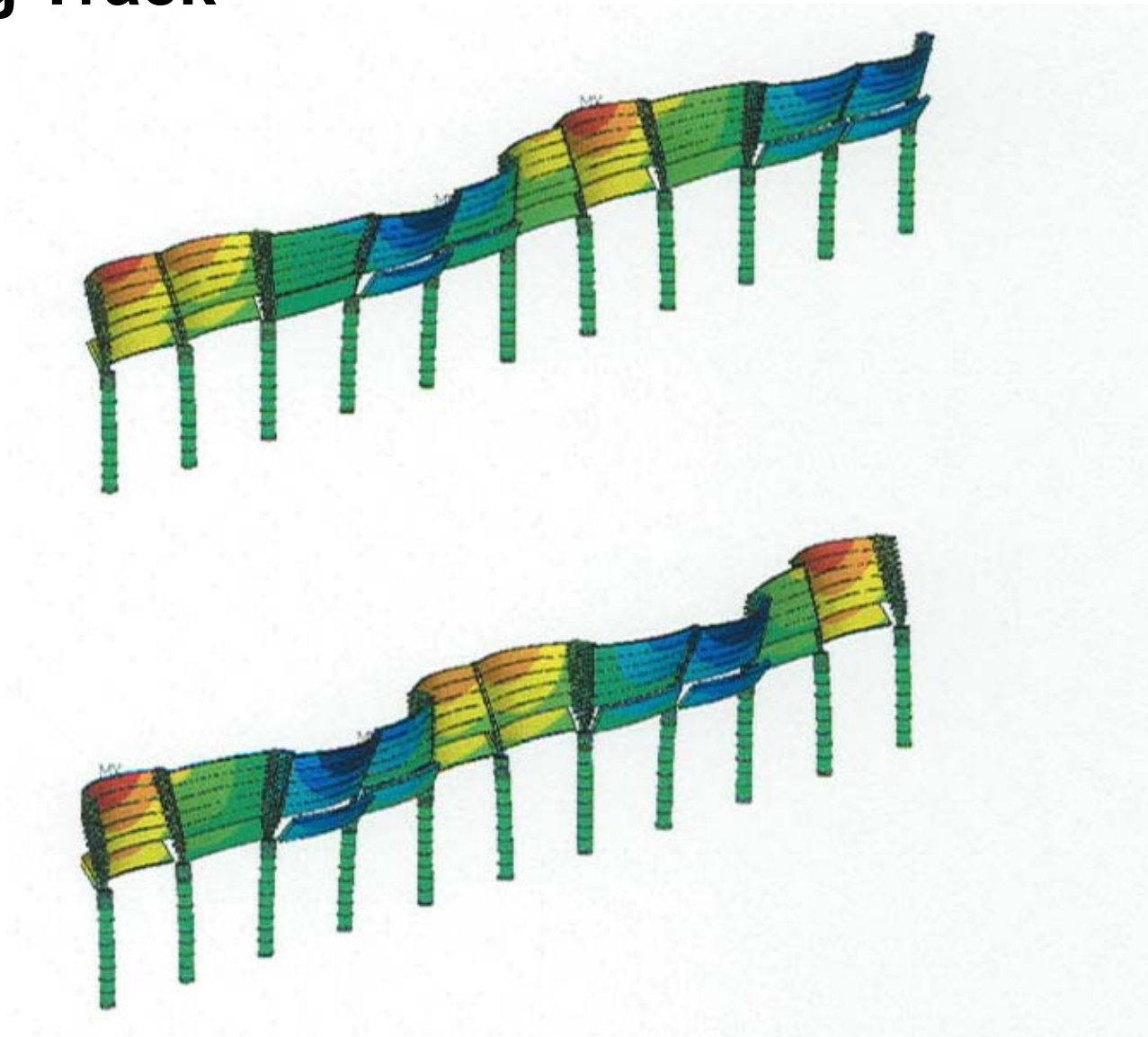


# Foundation



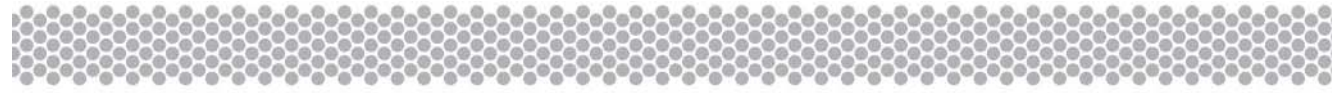


# Testing Track



## Extruded aluminium sheath test



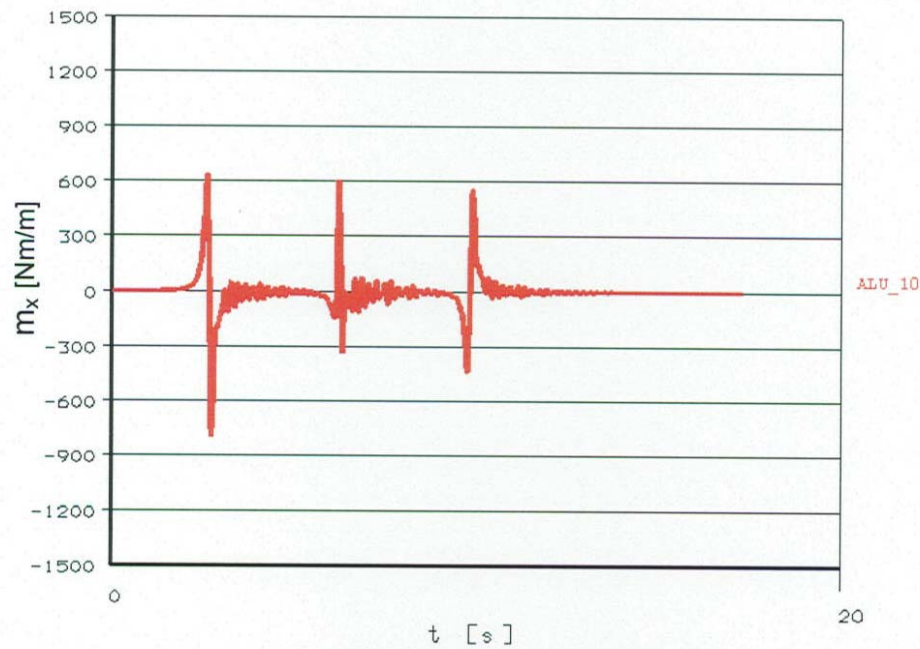


# Aluminium side plate test

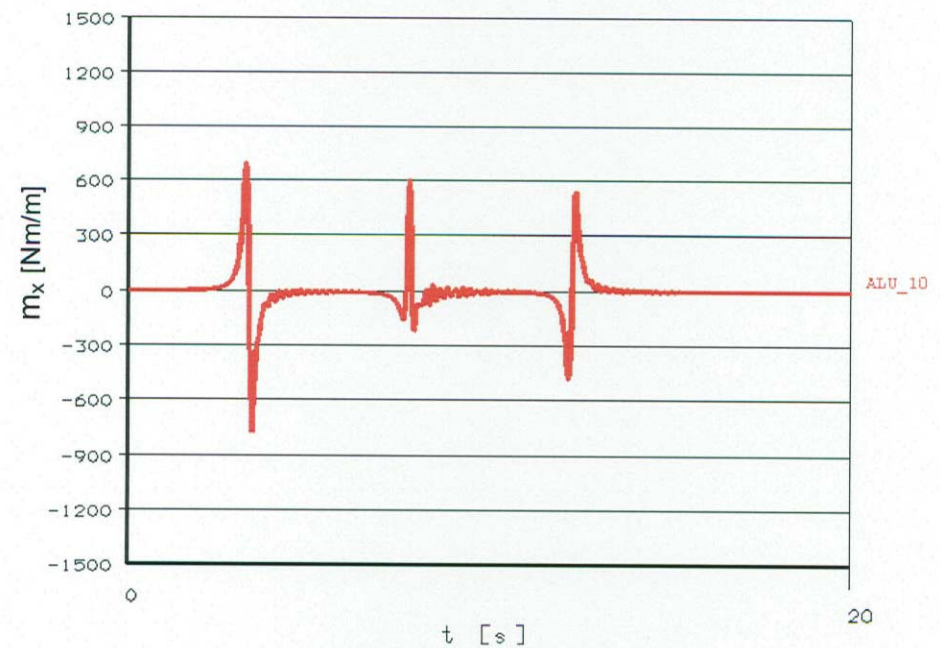


# Life cycle 50 years and more

## Function ICE Train 250km/h



## Function Freight Train 160km/h



# Certified by „Deutsche Bahn“



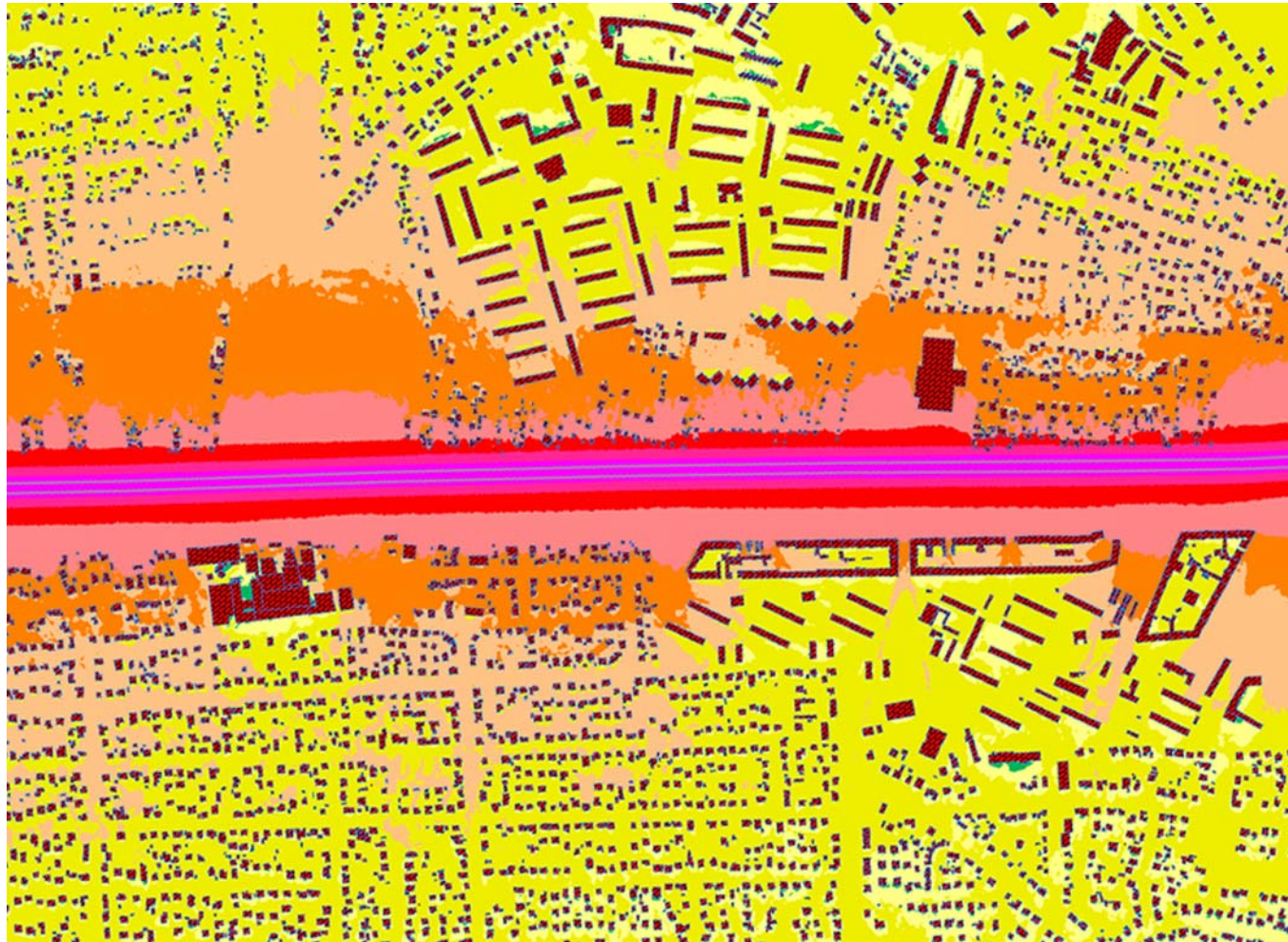
**Speedbarrier** V300

# Designed for your health



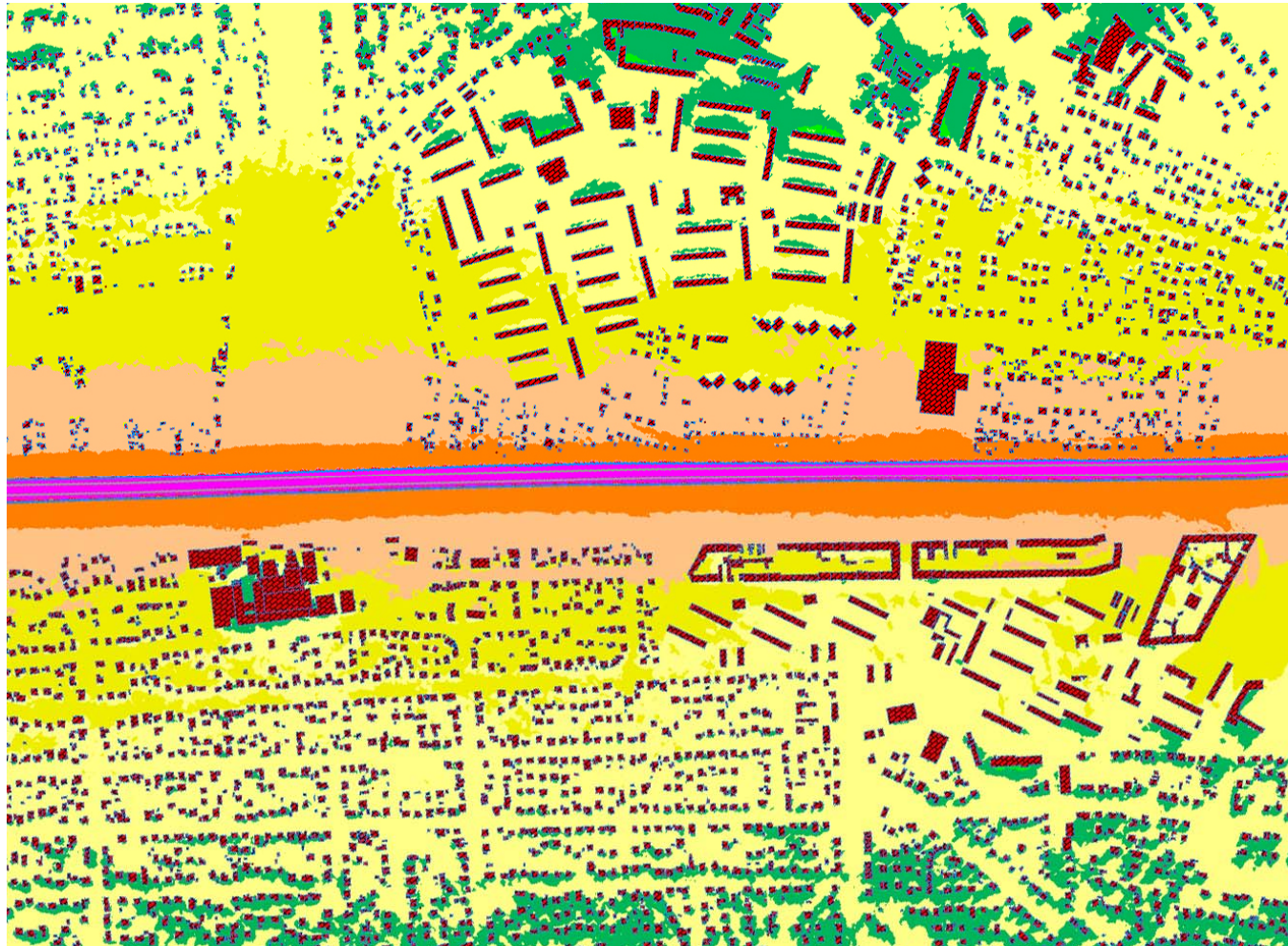
***IntenseBarrier 21dB***

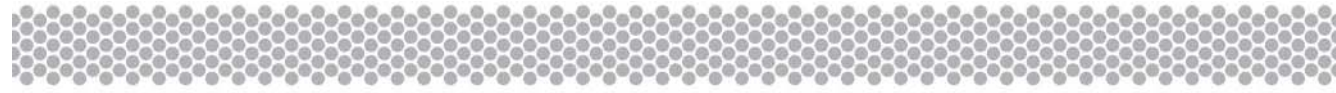
# Berlin 2010 - without noise protection





# Berlin 2010 - using *IntenseBarrier* 21dB





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**40% less noise**

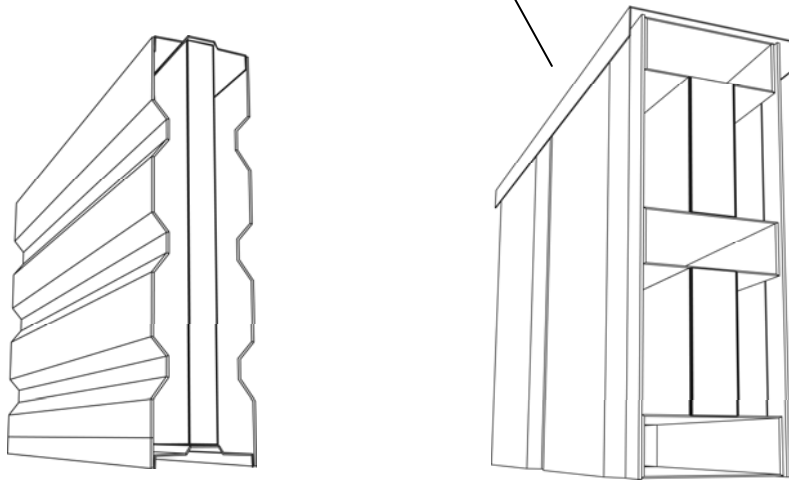


***IntenseBarrier 21dB***



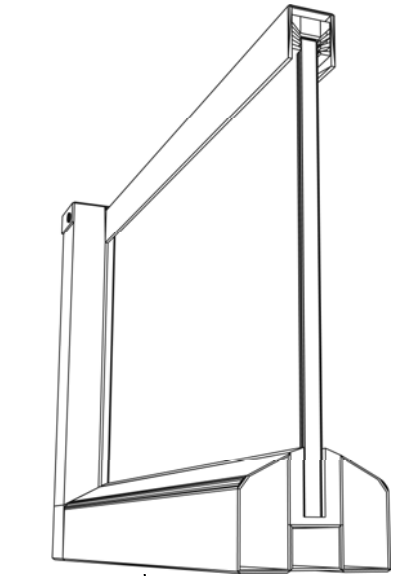
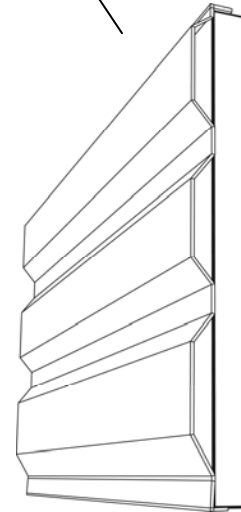
# Product Portfolio

Large Size Elements

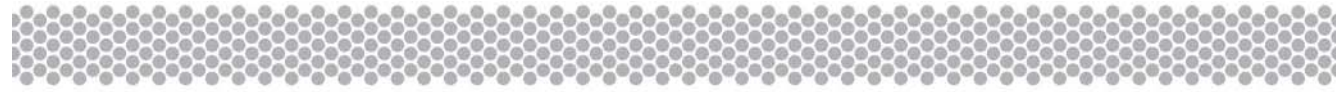


Schütte Standard Noise Barriers

Cladding



Glass Elements



# Aluminium Noise Barriers

**CE** certification “Made in Germany” according to EVS-EN 14388:2007

Sea water resistance

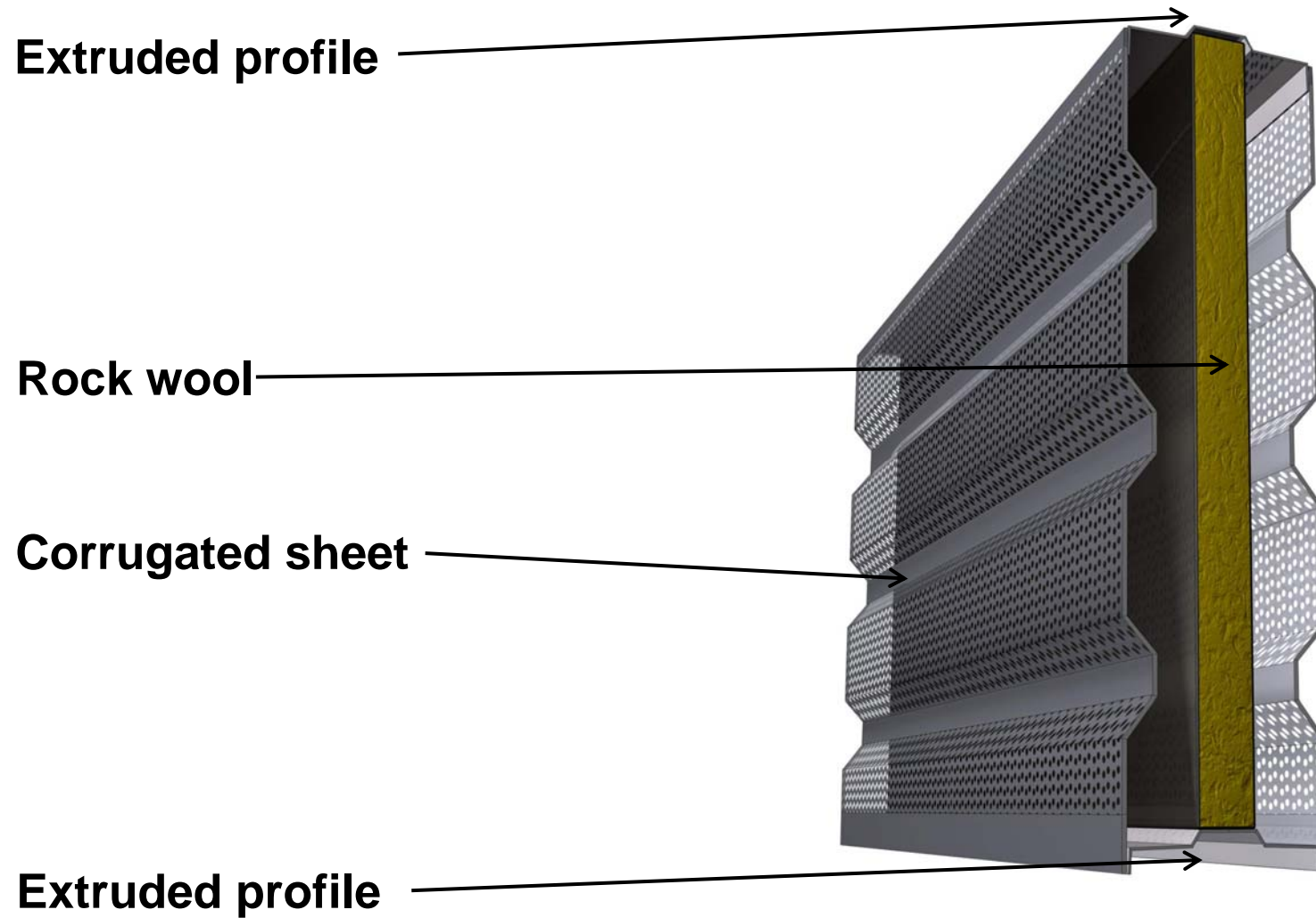
All RAL and special colours available

Permanent Anti - Graffiti coating available

Durability due to extruded aluminium profiles

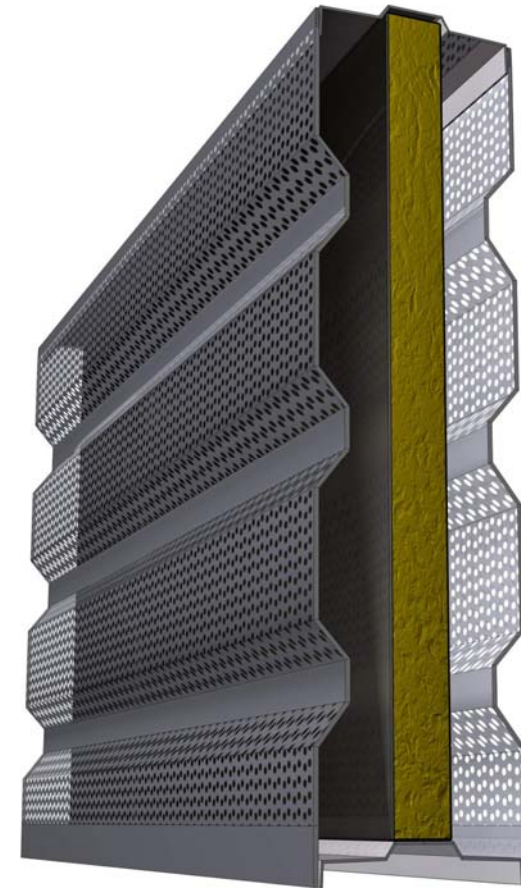
Recyclable

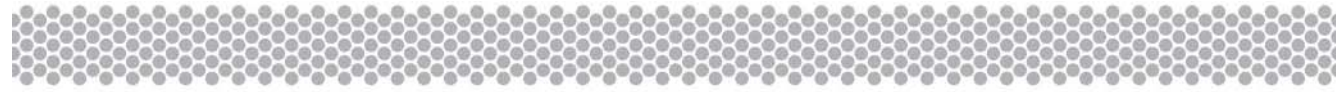
# Schütte noise barrier



## Schütte ELB

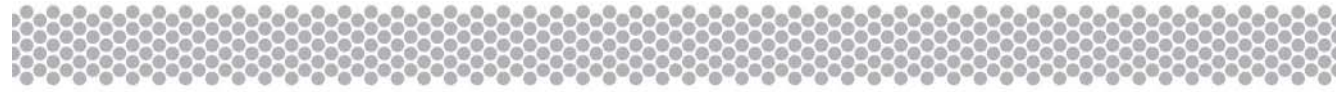
- Acoustical absorption (DLa) up to 21dB
- Sound insulation (Rw) up to 38dB
- Up to 6m length
- **CE** certification “Made in Germany” according to EVS-EN 14388:2007
- Snow ploughing resistant optional
- Standard height 500mm
- Single- or double-sided highly absorbent





# Schütte ELB - References





## Schütte 6m element length

Up to 20% cost reduction

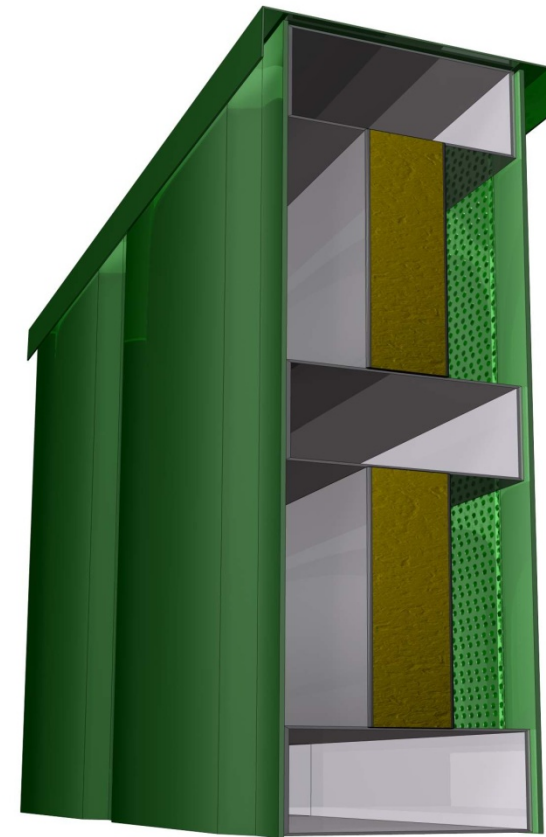
Risk reduction due to less foundations

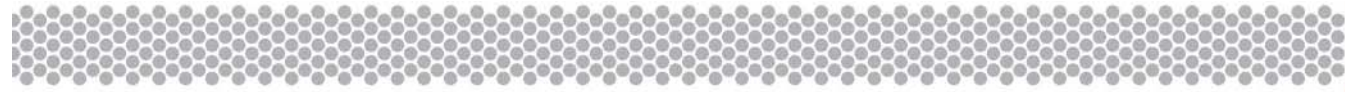
Time saving



## Large Size Elements (GF)

- Post clearance up to 6m
- Individual design options and custom-made shapes
- Photorealistic motives
- High stability based on frame construction



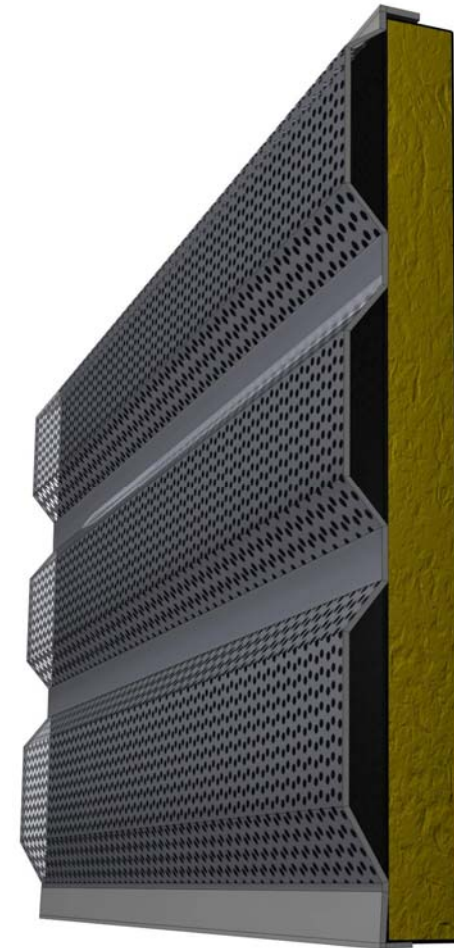


# Large Size Element - References



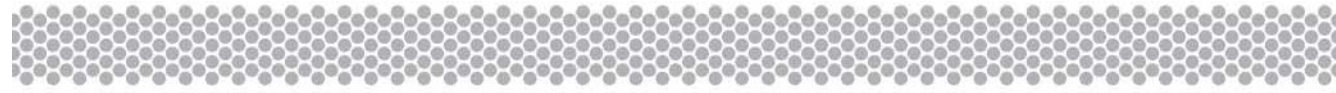
## Cladding (VS)

- Acoustical absorption (DLa) up to 13dB
- Ideal for cladding of tunnels and subways
- Flexible assembly (vertical, horizontal, diagonal)
- Cost-effective assembly on every underground
- High durability through rear ventilation in case of wet underground
- Up to 8m length



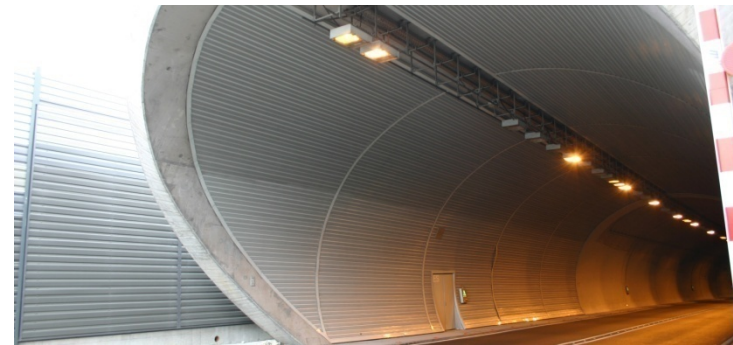
# Cladding - References

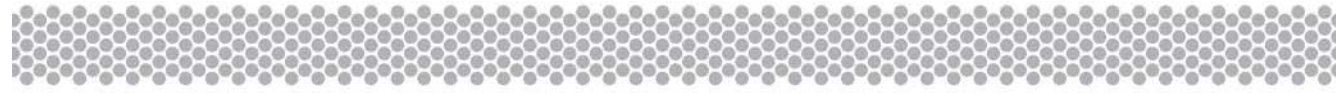




# Silent Night.

Cladding for tunnels and subways by Schütte





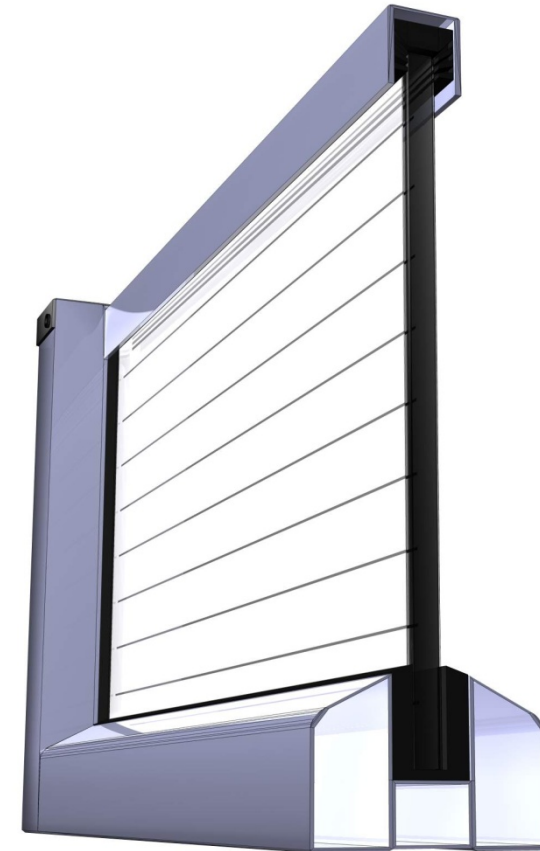
# Cost-effective

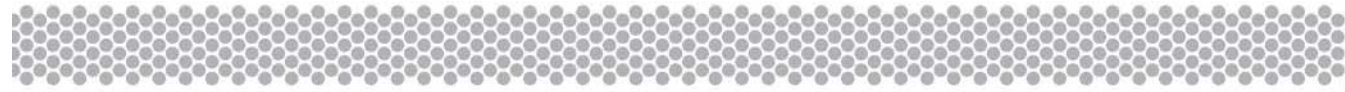


Cost-effective installation on uneven surfaces

# Glass Elements

- Frame made of extruded aluminium profiles
- Large variety of design options using different frames and special glass applications
- Properties:
  - Acrylic glass: impact resistant, rigid, lightweight
  - Glass: rigid, heavy
  - Polycarbonate: impact resistant, lightweight





# Glass Elements - References





# Exceptionally quiet.

Custom-made solutions by Schütte



# Exceptionally high

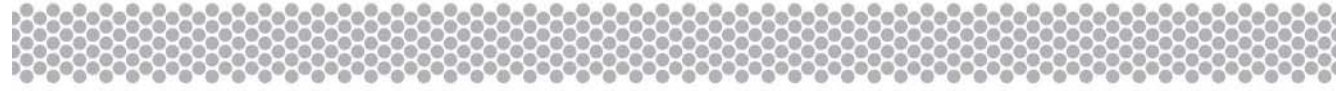


Airbus A380 in Hamburg

# Exceptionally innovative

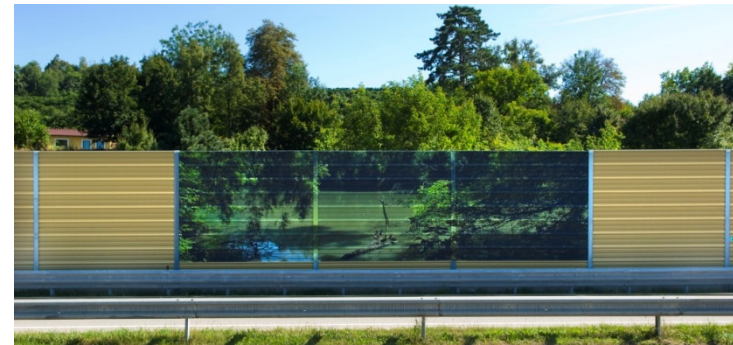
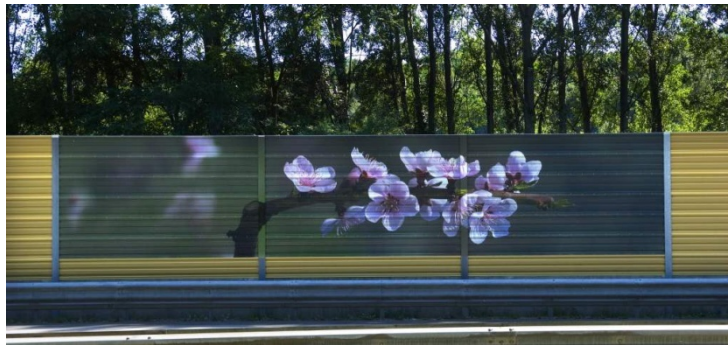


Photovoltaic noise barriers in Emden



# Beautifully quiet.

Noise barriers with photorealistic surface coatings



# Flexible



Ideal integration of the noise barrier in its environments through individual pictures and graphics

# Schütte noise protection systems

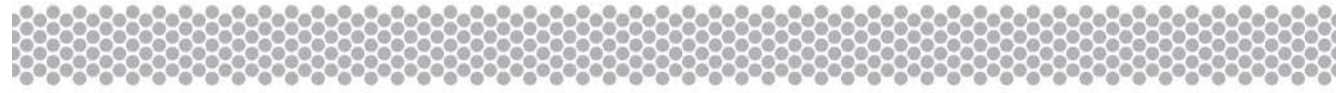
**CE** certification “Made in Germany” according to EVS-EN 14388:2007

**40% less noise** - 21dB sound absorption (DLa)

38dB sound insulation (Rw)

**20% cost reduction** - up to 6m length elements

Rail approved



**SCHÜTTE**

LÄRMSCHUTZ SYSTEME

*High speed meets best noise protection*



**Speedbarrier** V300

## *High Speed noise barriers*

Long life cycle – up to 50 years

Suitable for tight track distances

Saves substantial costs in international metropolises

Project specific dynamic calculations

Top quality 'made in Germany'





SCHÜTTE

LÄRMSCHUTZ SYSTEME

Visit us at the fair „Lärmschutz“ in Dortmund  
from 11. - 12. November

The advertisement is a composite image. On the left, a woman is shown sleeping peacefully with her eyes closed and a slight smile. On the right, a high-speed train is captured in motion at night, with its lights blurred into streaks of yellow and red. The background is dark, suggesting a night scene. The SCHÜTTE logo and 'LÄRMSCHUTZ SYSTEME' text are repeated in the top left and top right corners of the advertisement. A red square is visible in the bottom left corner of the advertisement.

SCHÜTTE  
LÄRMSCHUTZ SYSTEME

Sleep well!  
40% less noise

High-End Protection!

Rail approved  
Speedbarrier V300  
21dB Absorption  
Insulation 38dB (Rw)

## A strong partner in noise protection

30 years experience

Intensive research and development

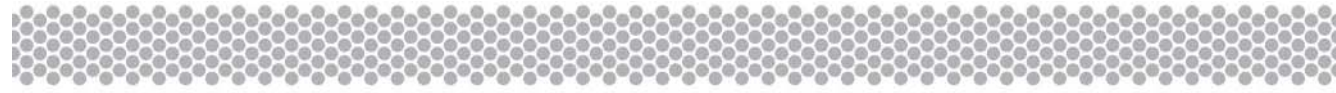
Acoustical absorption (DLa) up to 21dB

Sound insulation (Rw) up to 38dB

**CE** certification “Made in Germany” according to EVS-EN 14388:2007

“Deutsche Bahn” certificated elements

Market leading company in noise protection



## Special references



Estonian road nr 9 Ääsmäe - Haapsalu - Rohuküla km 49,4 - 64,2

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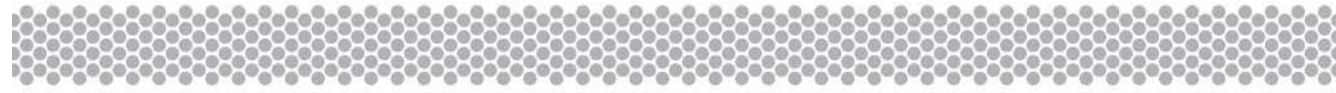


Estonian road nr 9 Ääsmäe - Haapsalu - Rohuküla km 49,4 - 64,2

## Special references



Estonian road nr 9 Ääsmäe - Haapsalu - Rohuküla km 49,4  
- 64,2 (Palivere - Rannaküla Noise barrier building at 2009)

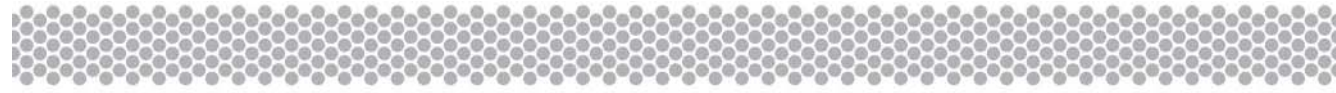


## Special references



Estonian road E20 Tallinn-Narva road





## Special references

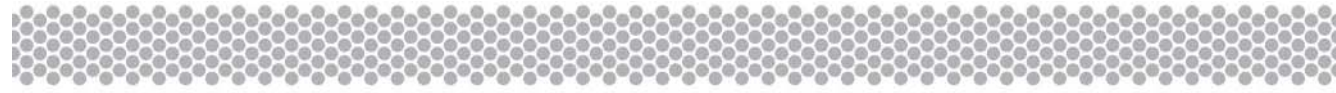


Estonian road E20 Tallinn-Narva road

## Special references



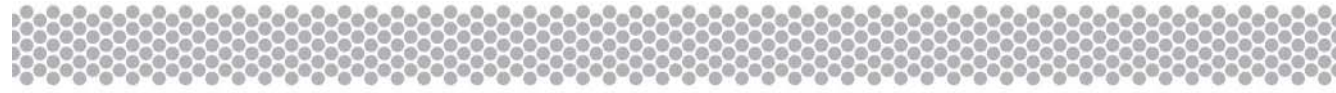
Estonian road E20 Tallinn-Narva road (Kukruse- Jõhvi Km 156-Km163 Noise barrier building at 2010)



## Special references



Estonian road E20 Tallinn-Narva road



## Our slowest workers

