

PRODUCT FACTS
THE NATUREBASED ACOUSTIC BARRIER

FACADES



DIMENSION

Width of element posts C-C	Height (standards)	Depth
CLASSIC 250 cm EASYPEASY 120 cm	100 cm, 150 cm, 200 cm, 250 cm, 300, 400, 500, 600 cm (EASY PEASY max 2,0 M H)	225-350 mm

NOISE DATA

Noise data	120 mm core	240 mm core CLASSIC only	Rockwool core certified according to EFIC (European Fire & Conductivity Laboratory) and classified as A1 to fire reaction.
Noise isolation DL_R	22 dB (category B2).	32 dB (category B3).	
Noise absorption DL_α	9 dB (category A3).	5 - 11 dB (category A2).	
R_W -value	26	37	

LIFE EXPECTANCY AND MAINTENANCE

- Life expectancy: CLASSIC + 36 years EASYPEASY: + 25 years
- CE-certified according to DS/EN 14-388.
- NATUREBASED NOISE BARRIER is a concept developed to ensure none or an absolute minimum of maintenance. Only:
 - Facades of living willow requires pruning (each or every second year) and on some locations irrigation during establishing years.
 - Ivy: Fertilizing + attaching the greenery to the barrier during first years of establishment.

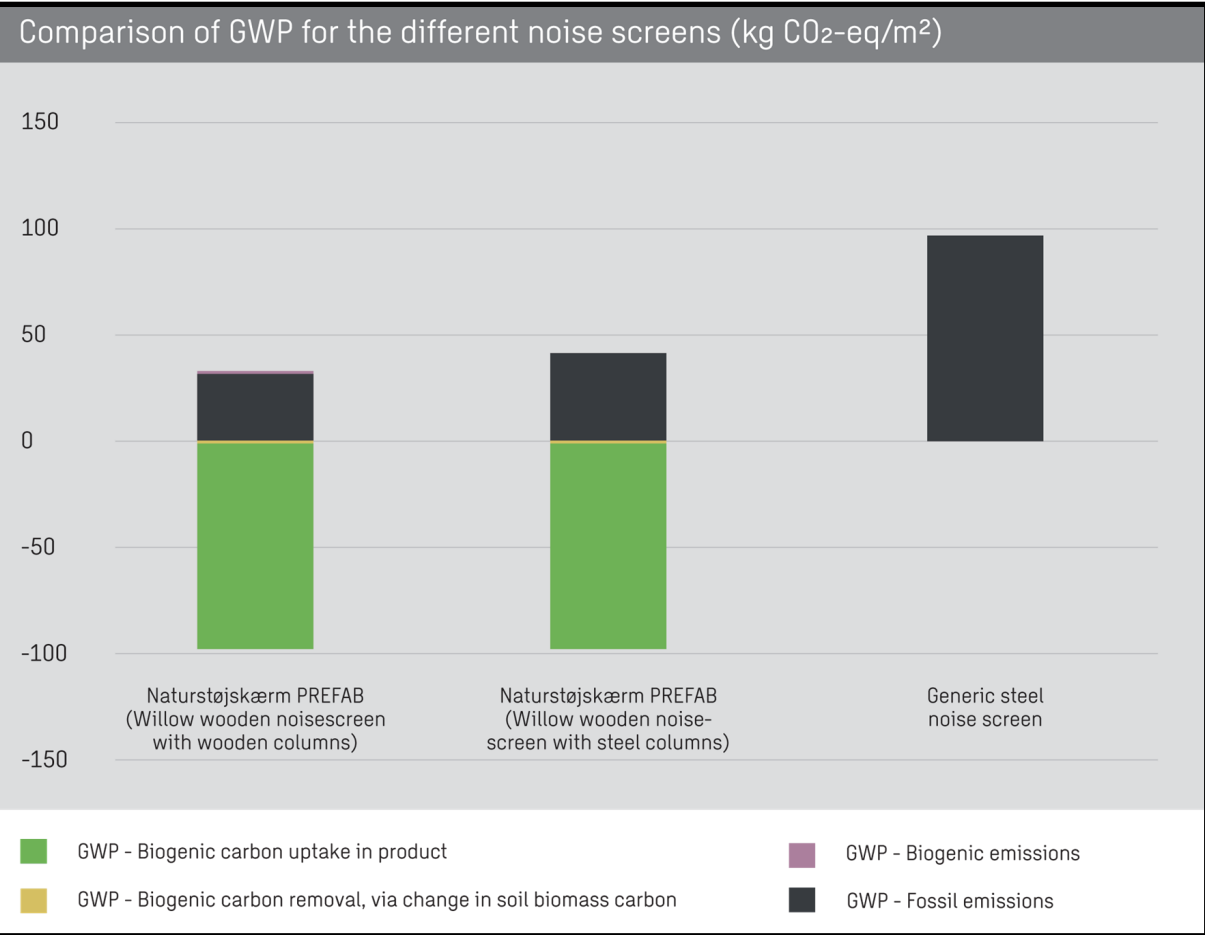
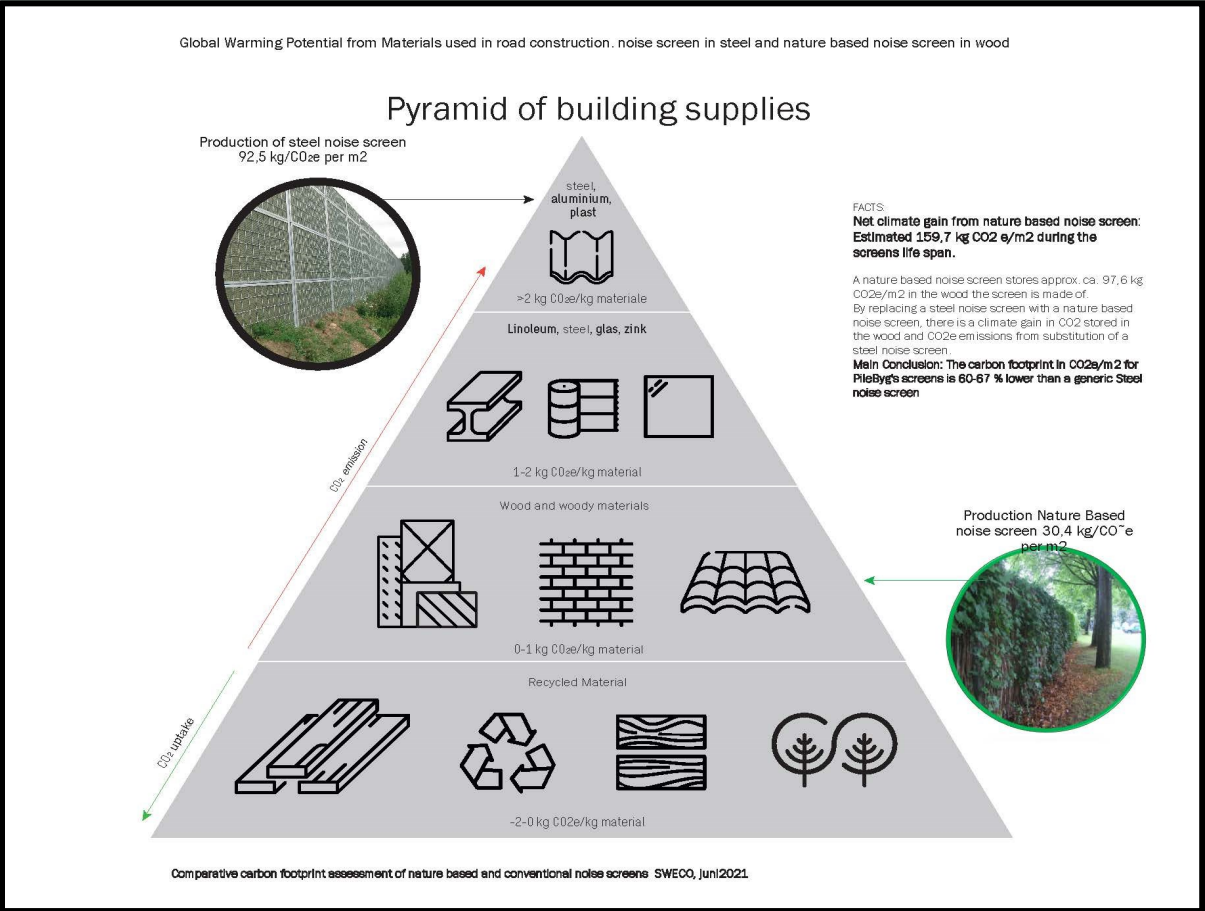
MATERIALS & MOUNTING

- Principle with posts of certified acacia or steel.
- Foundation of posts in concrete; reinforcement when required + socket shoe. Alternately foundations screws
- Core of mineralwool: Lapinus dual density 200/80 kg/m³
- Laths above ground of lark
- 3-5 year old willow rods, diameter 25-70 mm depending on the design.
- Mounting according to installation guideline. Hot-line for technical support.



PRODUCT FACTS - CLIMATE DATA

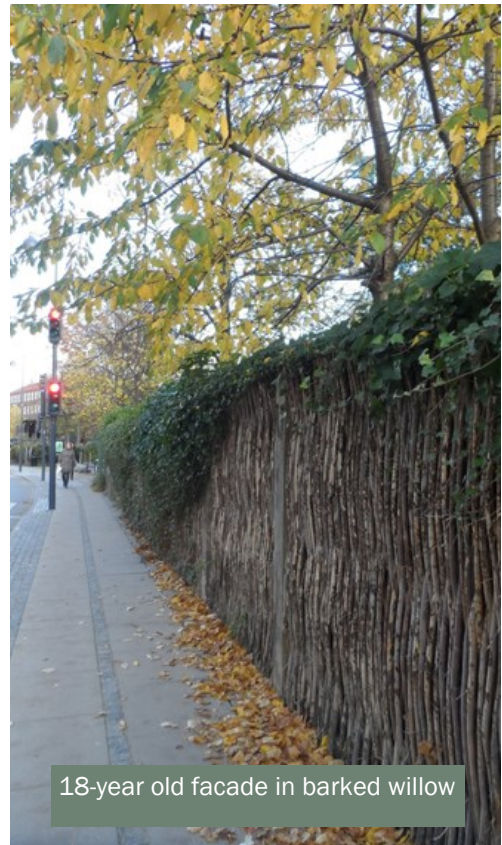
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FACADES IN WILLOW AND MAINTENANCE

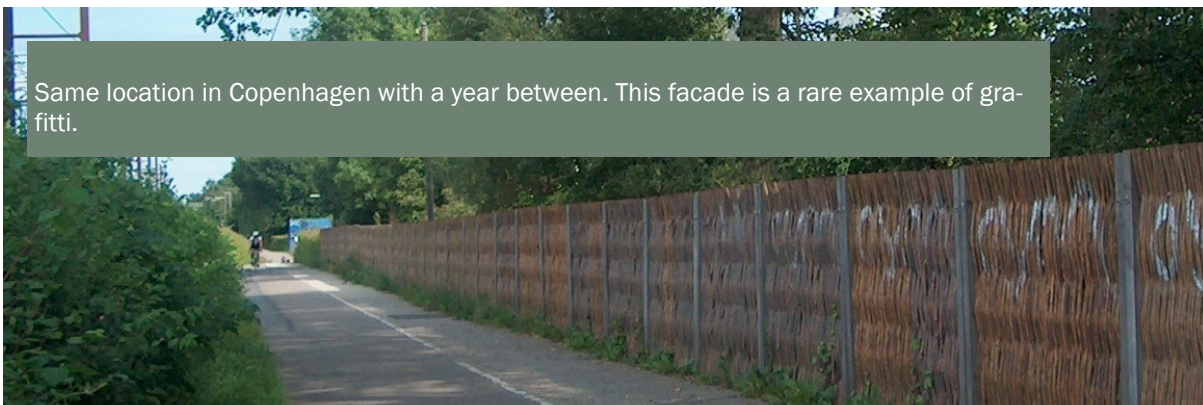
An environmentally sustainable design demands a smart and extensive maintenance strategy. THE NATURE BASED NOISE BARRIER does not require maintenance (unless it is living willow). The dried and whole rods in contrast to sawn wood is not "opened" Boards and panels have open or fractured wood fibers. Whole rods of willow has no damaged fibers and for that reason they age with a beautiful elegance. We always recommend planting by the facades to increase lifespan, improve habitat and increase carbon-uptake through the ivy. The structural integrity of the facades is estimated based on steel and wood of larch and acacia.



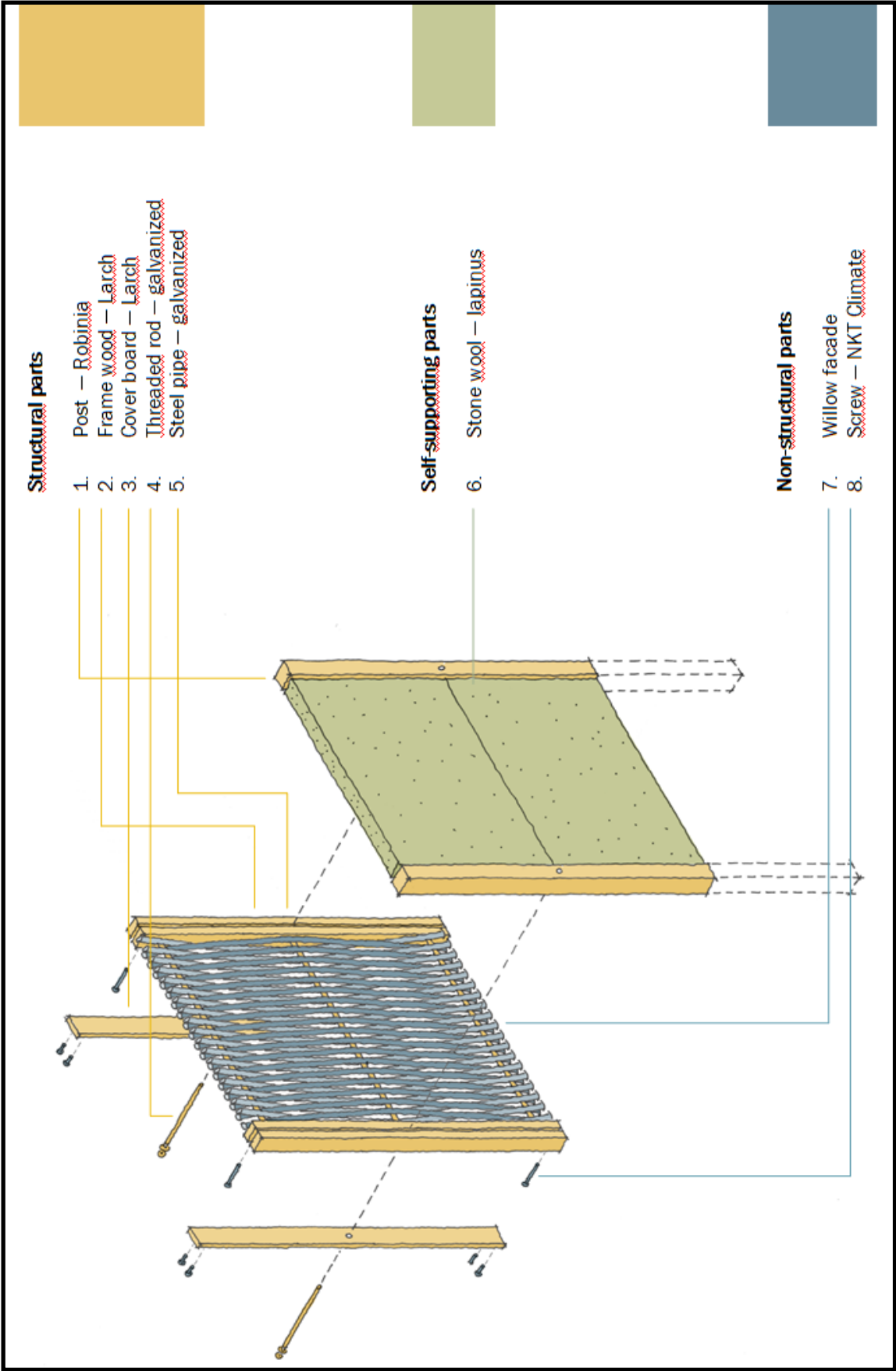
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GRAFFITI

A Natural looking and raw, uneven facade, does not invite to tagging or graffiti - Experience tells that when graffiti has been attempted on Nature based facades, the attempt has always failed. Painting on the willow seldomly succeeds The paint disappears in the uneven facade. Time has also revealed that the natural aging of the facade results in graffiti fading this is unique to the design of the PileByg Nature Based Noise Screen. A Couple of photos illustrate this principle.



THE NATUREBASED ACOUSTIC BARRIER



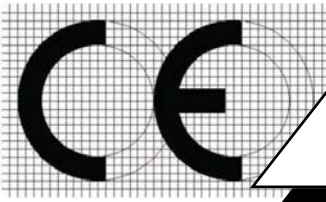
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Principle of installation



THE NATUREBASED ACOUSTIC BARRIER

CE-CERTIFICATE

 <div style="float: right; border: 2px solid black; padding: 5px; transform: rotate(-5deg); font-weight: bold; font-size: 1.2em;">EXAMPLE</div>			
0199 1136			
PileByg A/S Ville- rup Hovedgaard Villerupvej 78 9800 Hjørring Denmark			
DS/EN 14388:2006, DS/EN 1794-1:2003 and DS/EN 1794-2:2003			
Noise Screen for reduction of trafic noise. Type: BASIC+ / CLASSIC Width = 2500 mm;			
Facade options: Heat treated willow, debarked Williow, steel casette. Acoustic element with 120 mm insulation, type: RockDelta Stonewool Dual 200/80kg/m ³			
Dry and decreased wet weight of an acoustic element:			
Dry vægt	Ca 32 kg/m ²		
Decreased wet weight	Ca 43 kg/m ²		
Data for materials (Characteristic values):			
Steel S235	Pressure Strenght $f_{c,0,k}$ $f_{y,k}=235$ MPa	Bending stength $f_{m,k}$	Elasticitymodule E_k 2100GPa
Reglar C24			
Resistence to loads above Max load (*if characteristic value):			
Maximum vertical load an element can withstand:	1,0kN/m*		
Normal (90°) load an acoustic element can withstand (caused by wind and static)		0,94 kN/m ² *	
Normal (90°) load a structural element can withstand (Caused by wind, weight og static): co- lumns			
Reglar C24	Dim. 2"x 5-6"	1,60 kN/m	
Sound Absorption: DL_α		9 dB	
Airborn sound isolation: DL_R		22 dB	
sound reduction index: R_w		26 dB	
Reflection of light:		NPD	
Risk of falling components:		Klasse 0	
Expected lifespan:			
Lifespan, Acoustic Element:		50 år	
Lifespan, Structural Element:		+36 år	