

EUROCODE 1(GB), Part 2-4, from May 1995

A service of  
SIG D and T  
Steve Cleminson - Technical Manager

date of calculation: 25.03.2010

Client

Example

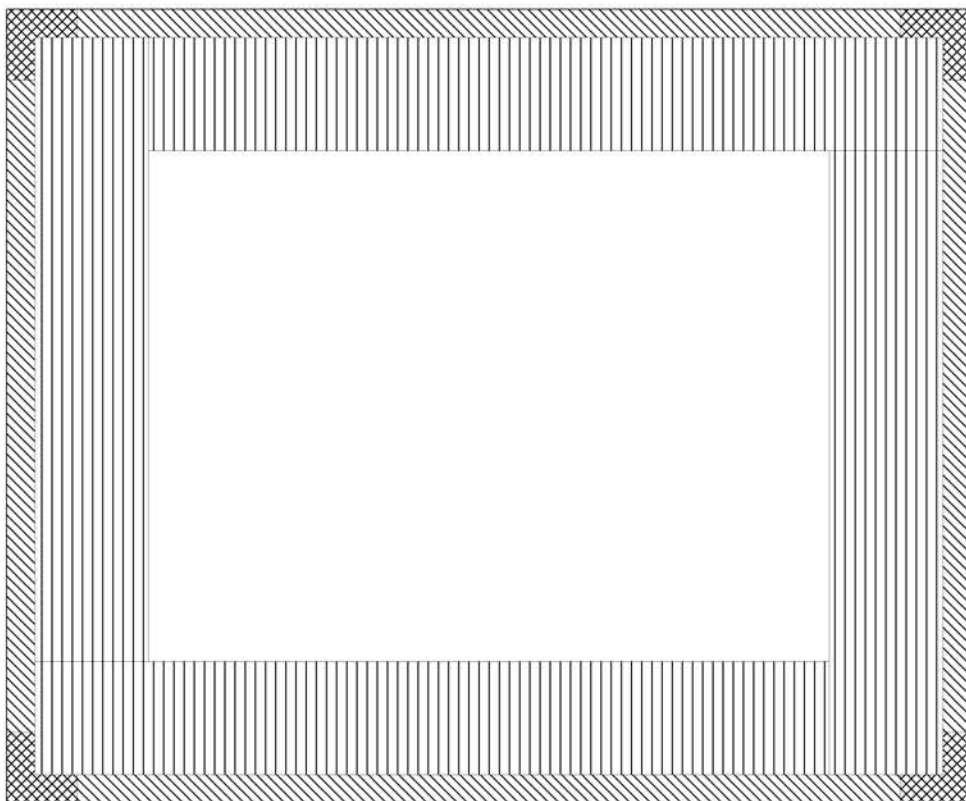
Building project

Building A  
Roof 1

membrane type

Rhepanol fk -Klett

Fixings



## Building project

Building A  
Roof 1

## SPECIFICATION

### Specification of the building

height : 10.00 m  
area: 3808.00 m<sup>2</sup>  
girth: 248.00 m  
lines: 248.00 m (perimeter lines fixing)  
parapet: 0.00 m  
wall openings Luv: 0.00m<sup>2</sup> total: 0.00m<sup>2</sup>  
roof pitch 1.0°

maximum design load (seam/middle through the membrane)

corner : 0.400 kN / 0.400 kN  
external perimeter: 0.400 kN / 0.400 kN  
internal perimeter: 0.400 kN / 0.400 kN  
inner : 0.400 kN / 0.400 kN

### additional datas

wind zone: area 4  
ground roughness category: area 4  
Cfr: 0.000  
Ctem: 1.000  
Cdir: 1.050  
Calt: 1.000

substrate: corrugated steel deck, distance between corrugations 150 mm  
exposed location: no  
building: closed

Building project

Building A  
Roof 1

## CALCULATION

area	area[m <sup>2</sup> ]
corner	64.00
external perimeter	416.00
internal perimeter	1600.00
inner	1728.00
total	3808.00

dynamic wind pressure [kN/m<sup>2</sup>]: 0.365

area	fastener dist.	distance between lines	fastener per m <sup>2</sup>	fastener total
corner	0.150m	0.703m	9.48	607
external perimeter	0.150m	0.800m	8.33	3467
internal perimeter	0.450m	0.800m	2.78	4444
inner	0.600m	0.800m	2.08	3600
total			3.18	12118

project file:C:\Documents and Settings\Stephen Cleminson\My Documents\2010 Example.prj

Building project

Building A  
Roof 1

QUANTITY OF MATERIAL

roofing membrane mechanically fixed

Rhepanol fk -Klett  
width: 1.05m                      total: 3999m<sup>2</sup>

line fixation

length : 4771.02 m

Befestiger

corner area     : 607 fastener  
external perimeter area: 3467 fastener  
internal perimeter area: 4445 fastener  
inner area     : 3600 fastener  
linear perimeter fixing   : 1654 fastener ( )

total             : 13773 fastener

Building project

Building A  
Roof 1

## APPLICATION MANUAL

corner area

line fixation  
distance between lines 0.703 m  
pattern of fasteners:  
every upper corrugation

external perimeter area

line fixation  
distance between lines 0.800 m  
pattern of fasteners:  
every upper corrugation

internal perimeter area

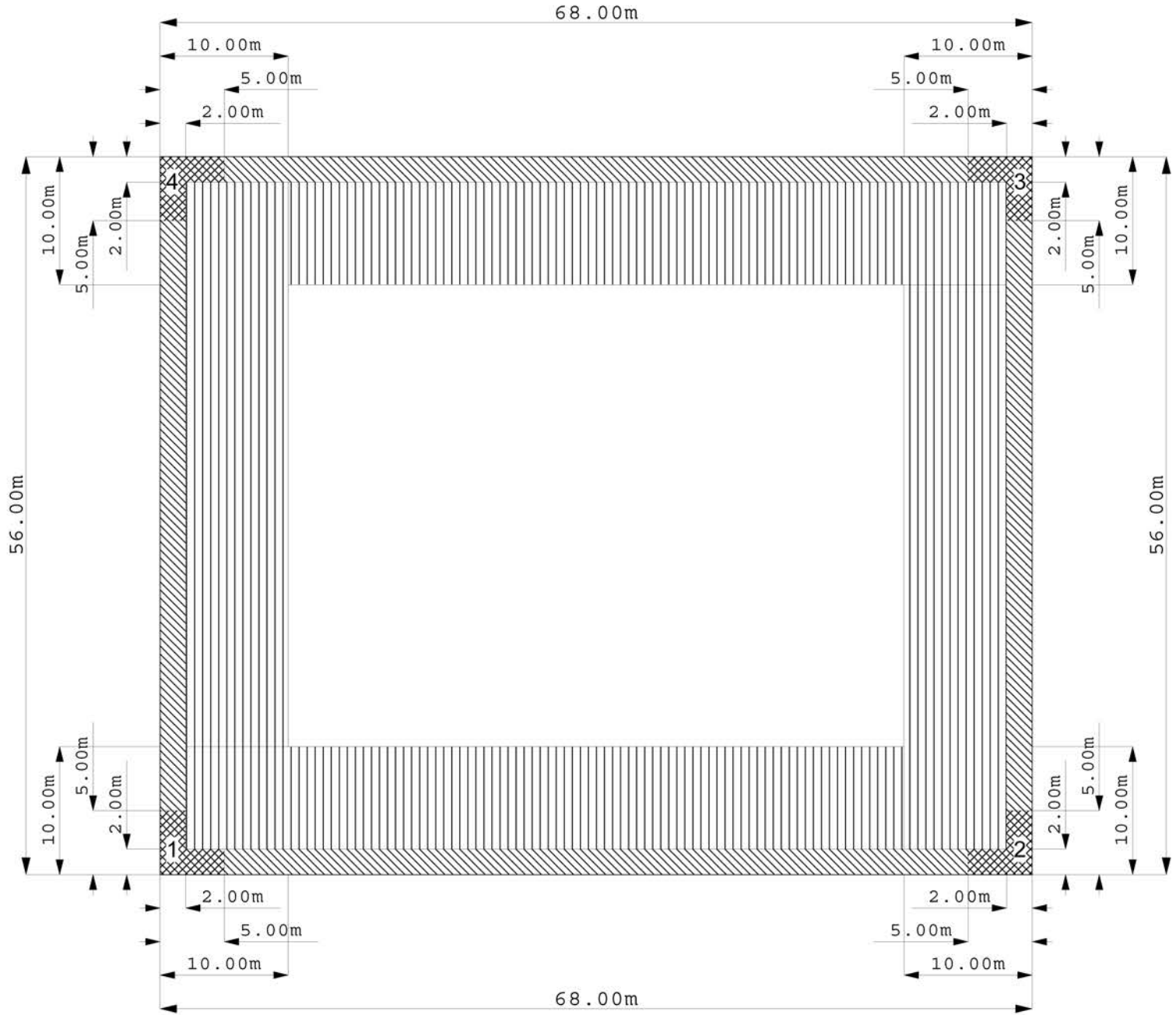
line fixation  
distance between lines 0.800 m  
pattern of fasteners:  
every 3. upper corrugation

inner area

line fixation  
distance between lines 0.800 m  
pattern of fasteners:  
every 4. upper corrugation

linear perimeter fixing

distance = 0.150 m



9.48 fastener per m<sup>2</sup> in corner area
  8.33 fastener per m<sup>2</sup> in external perimeter area
  2.78 fastener per m<sup>2</sup> in internal perimeter area
  2.0 in

Pay attention to enclosed application manual.

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