

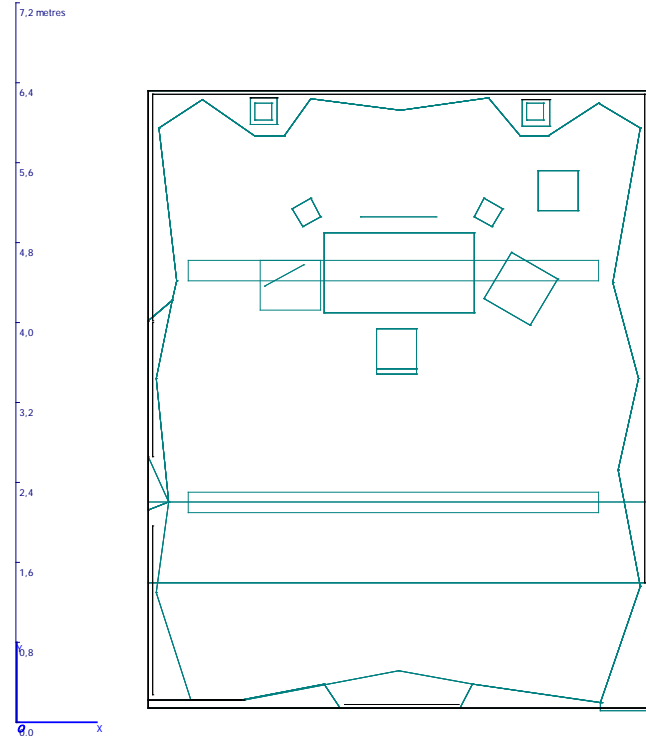
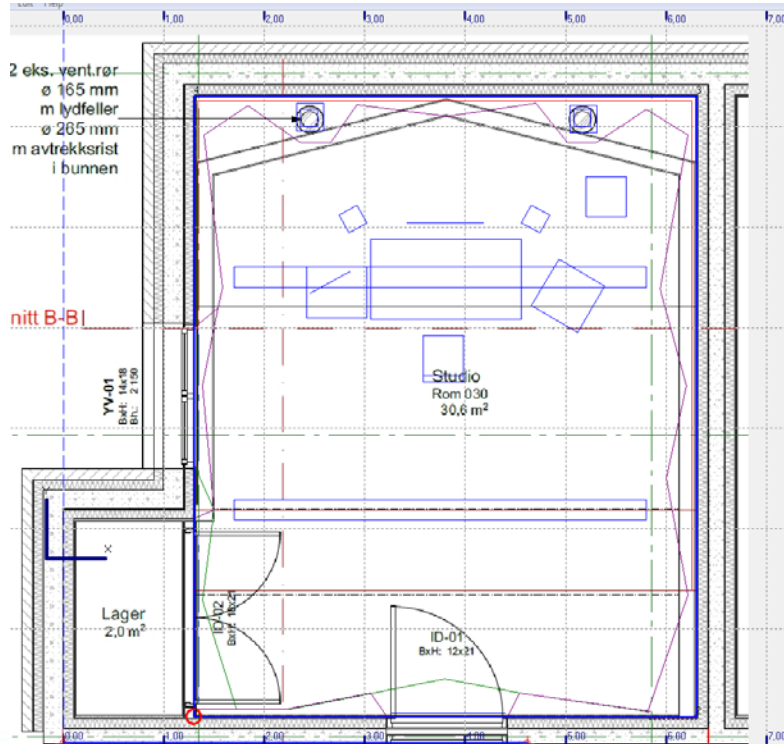
BREKKE  STRAND

Musikk-konservatoriet i Tromsø

Romakustisk innredning
Studio Kontrollrom

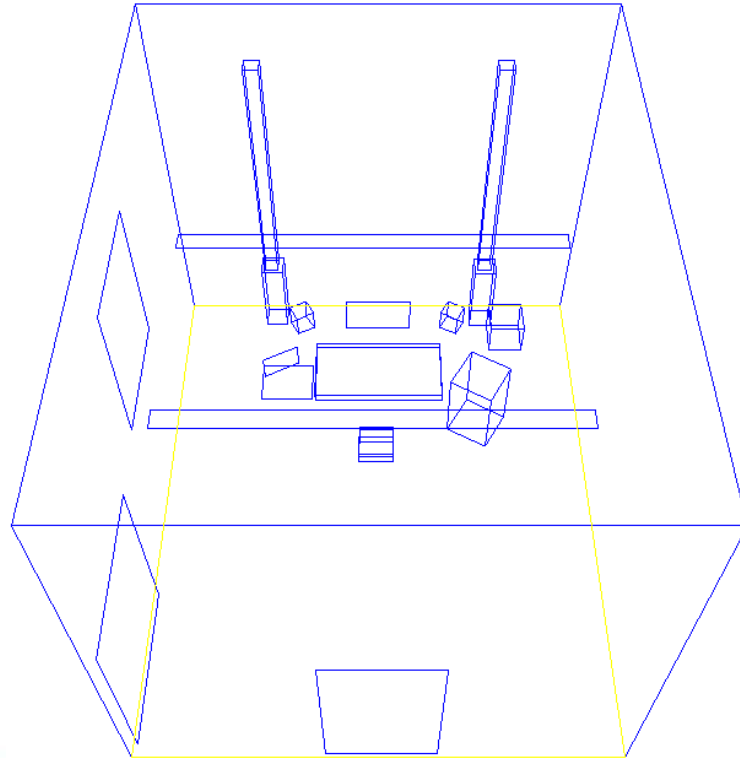
Oppdatert: 11. november 2020

Kontrollrom Lyd



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Obligatoriske elementer

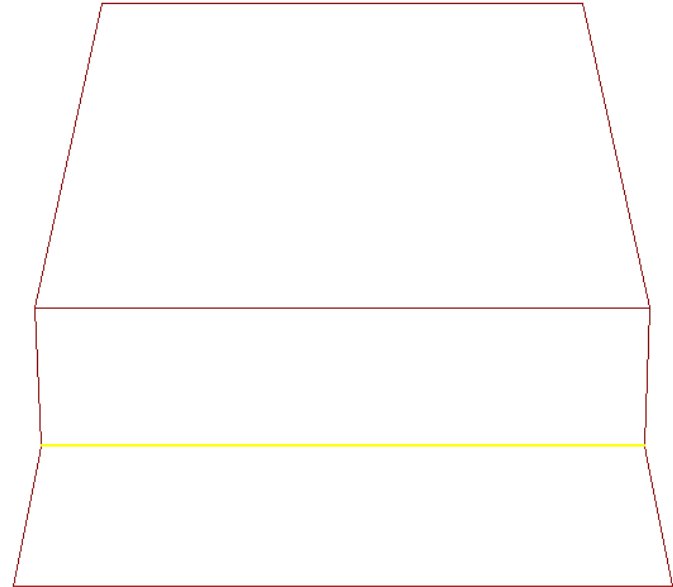


Type_0 Himling

Eksisterende himlingshøyder beholdes.

Bæresystemet kan beholdes eller erstattes med nytt.

Nye 600x600 himlingsplater:
50% 40mm Ecophon Master og 50% gipsplater
(tykkelse 6-13mm), fordelt i sjakkmønster.



Trepanel

Type 1 (not-og-fjær)

Bakenforliggende vegg

Mineralull

14x120 Trepanel not-og-fjær

Type 2 (spaltepanel)

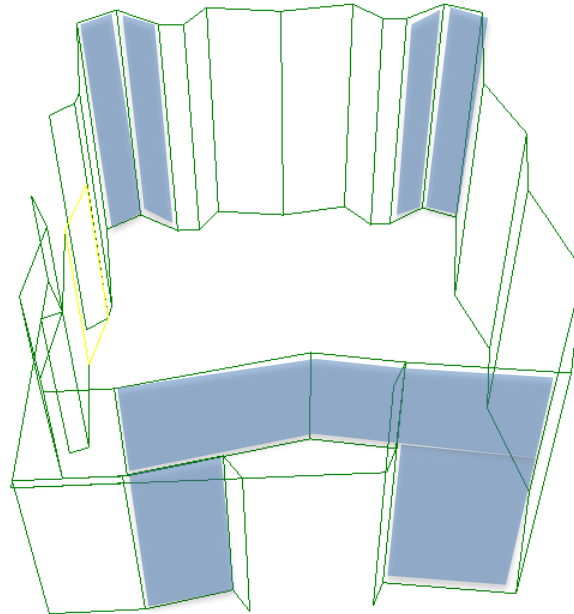
Bakenforliggende vegg

Mineralull, gj.sn. 200mm

Fiberduk

21x120 Furu glattkant

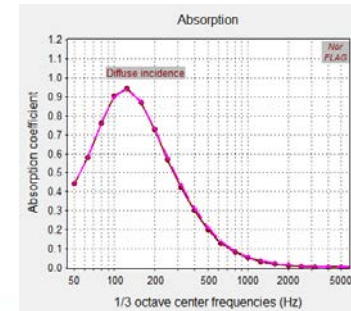
4 mm spalt cc 124



Type 1
14x120



Type 2
21x120



Type 3: 30mm mineralull og sprinkler uten på

Bakenforliggende vegg

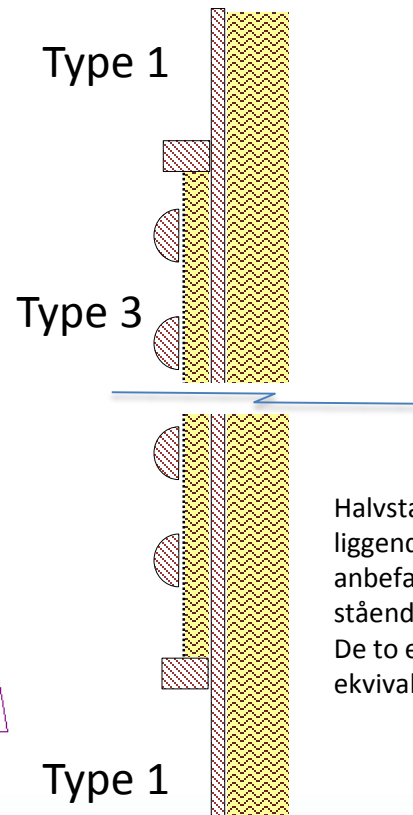
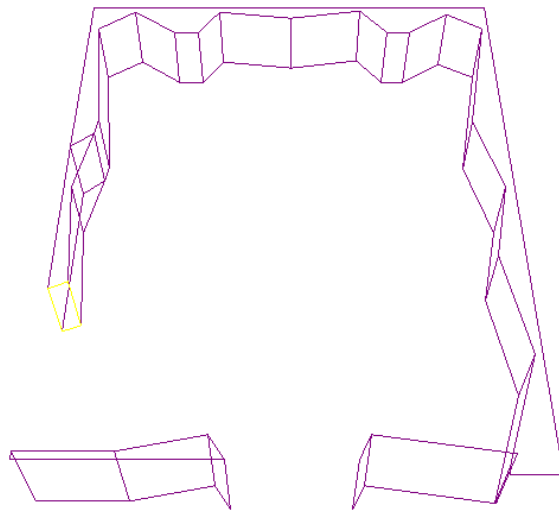
Mineralull

Trepanel not-og-fjær

30 mineralull

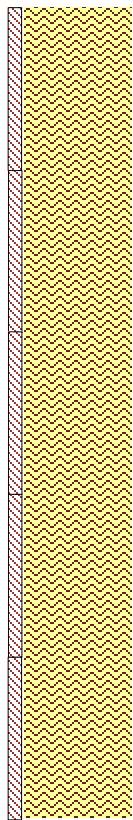
fiberduk

14x28 halvstaff cc 70

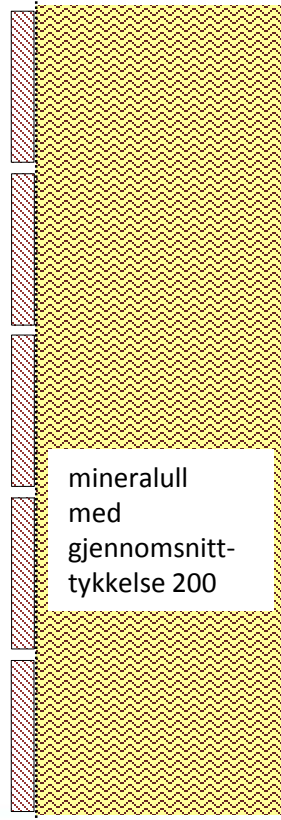


Halvstaff er her vist liggende. Av støvhensyn anbefales gjerne stående orientering. De to er akustisk ekvivalente

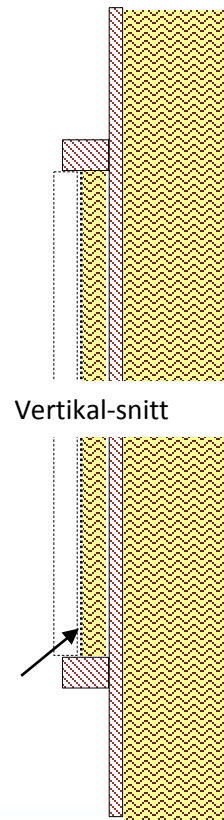
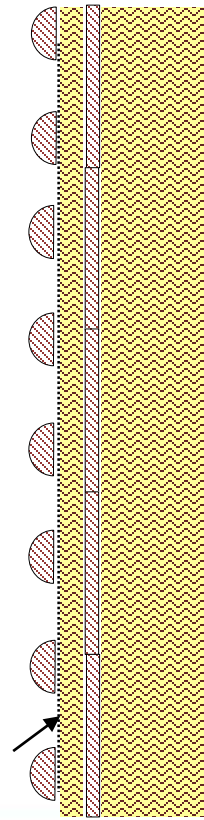
Type 1:
14x120 not-og-fjær



Type 2:
21x120 og 4 spalt



Type 3, utenpå trepanel
30 min.ull, 14x28 halvstaff cc=70



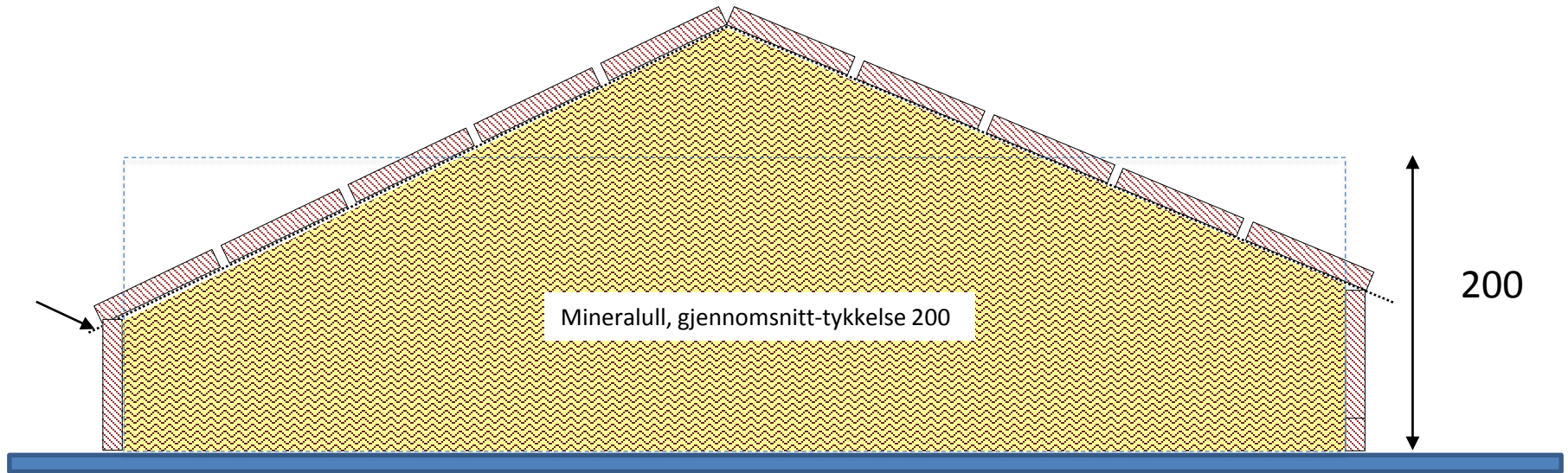
Horisontale snitt
(stående paneler)

Vertikal-snitt

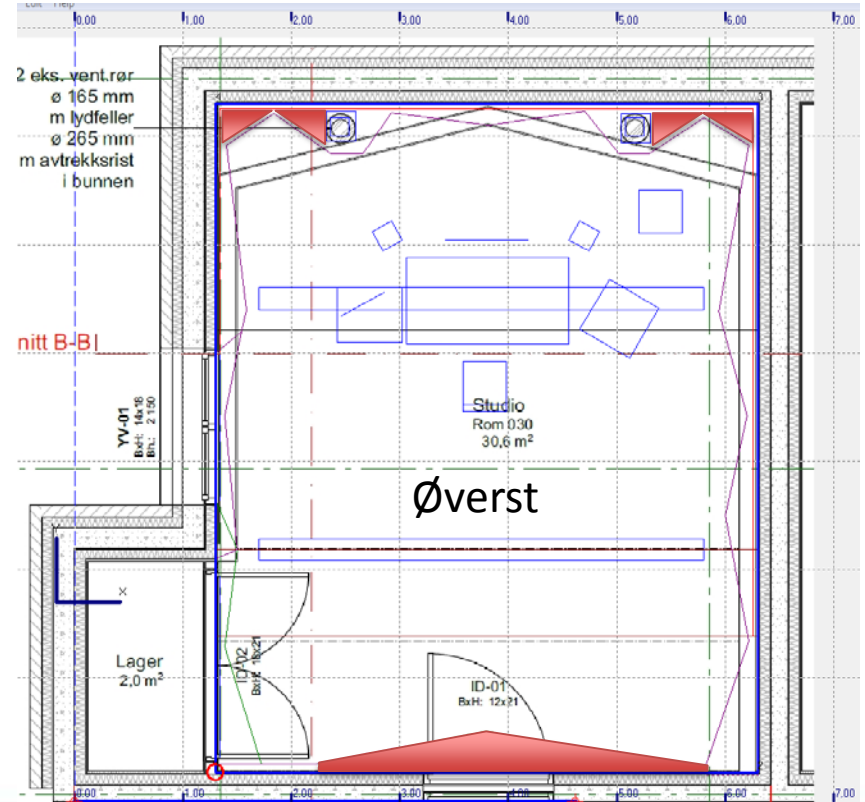
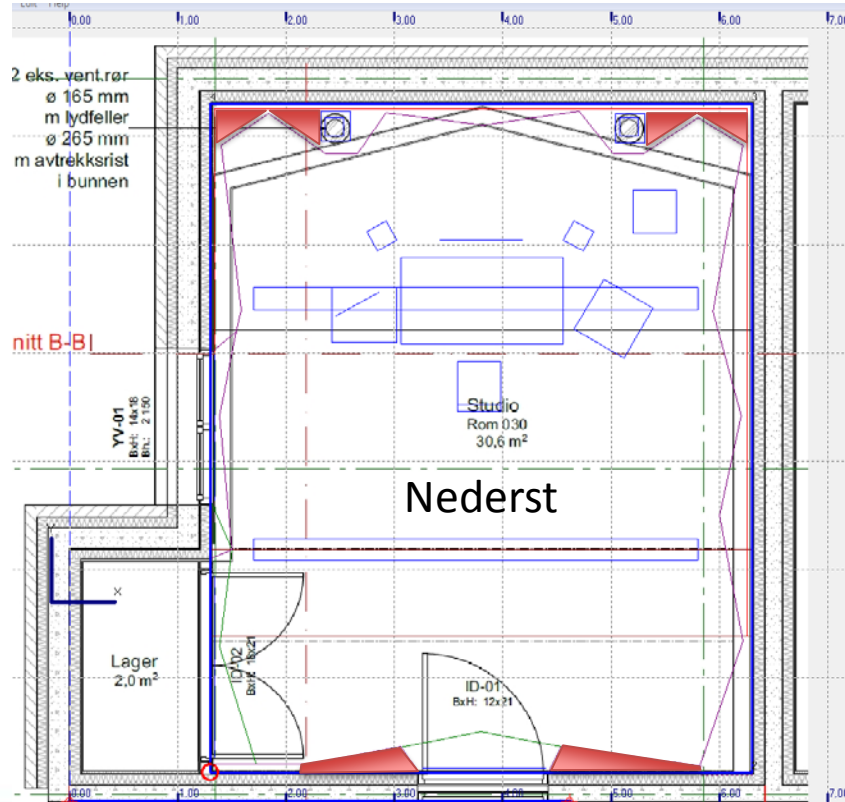
↗ = fiberduk

Type 2:

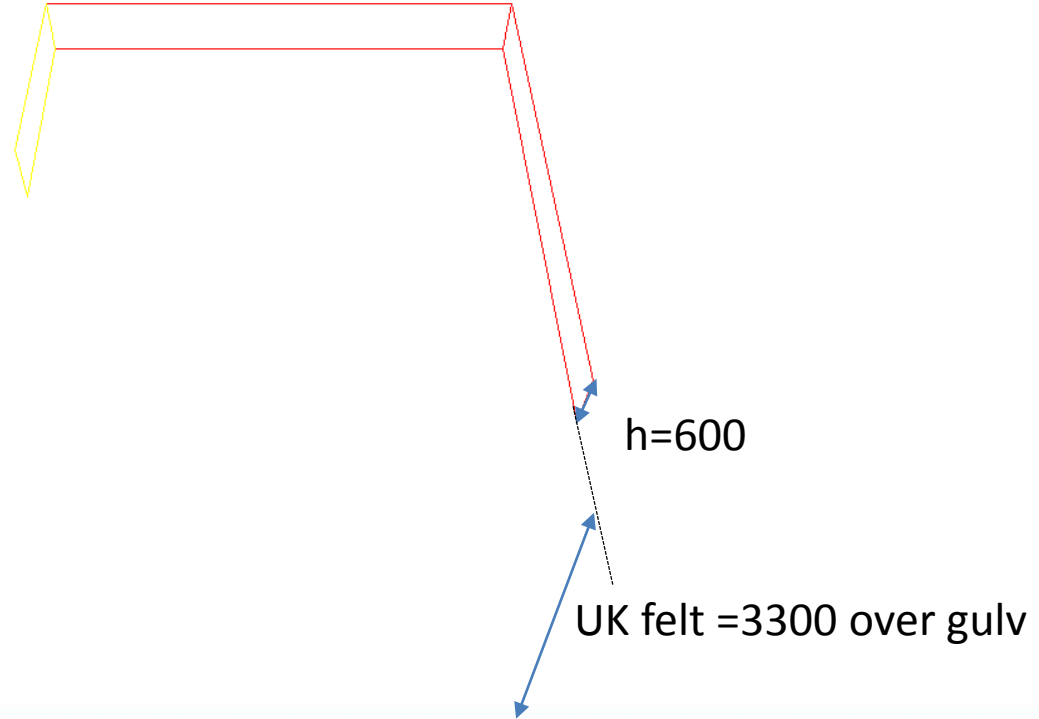
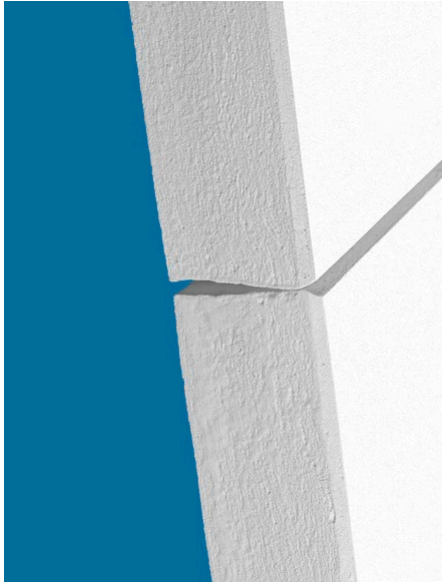
21x120 og 4 spalt, fiberduk (se pil), volum helfylt med mineralull
Volumet er lukket over, under og på sidene, med foringer ved avslutninger av feltet eller der Type 2 møter Type 1.



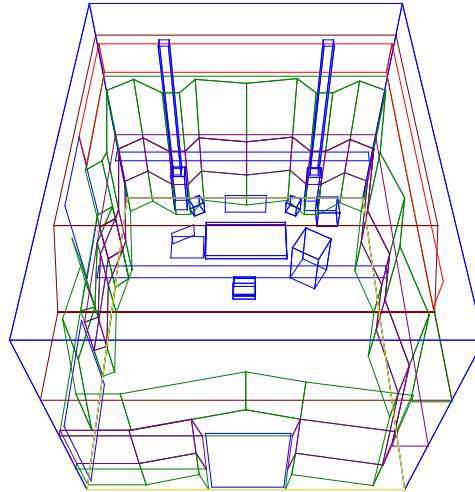
Type 2 elementer i plan



Type 4: 40mm Ecophon Master limt på gipsveggene



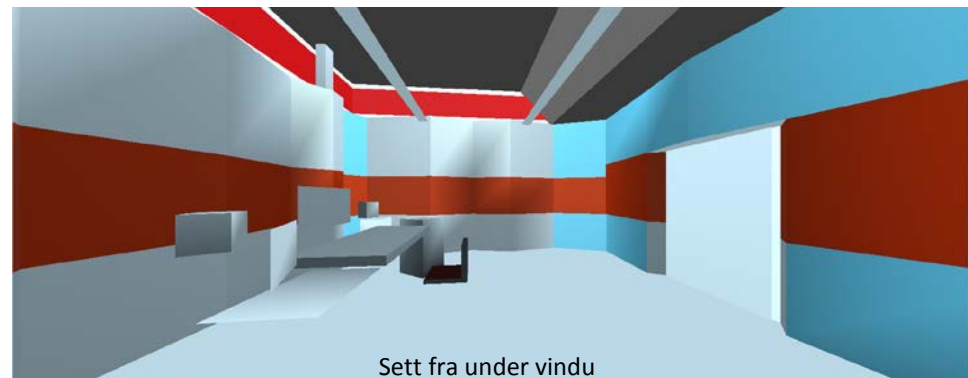
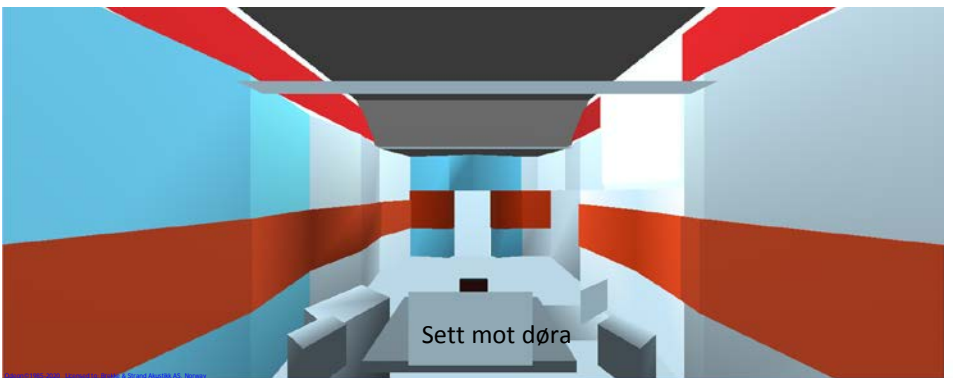
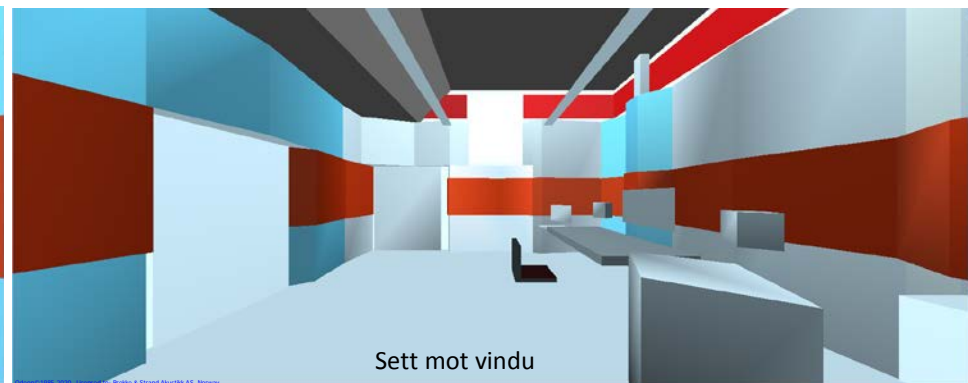
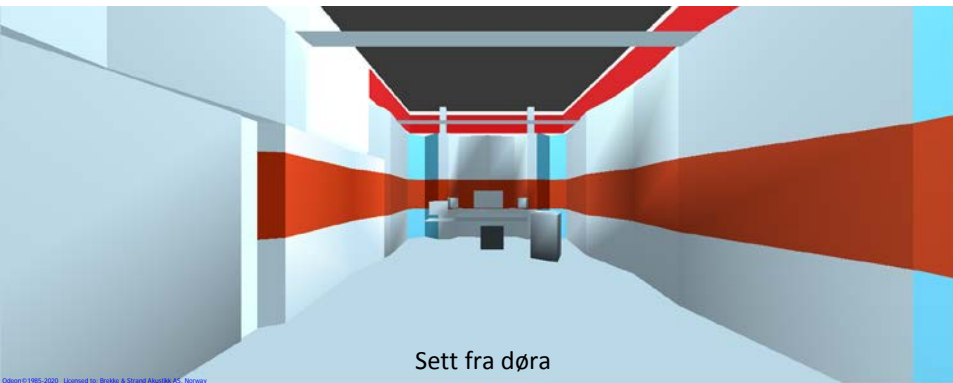
Alle elementer



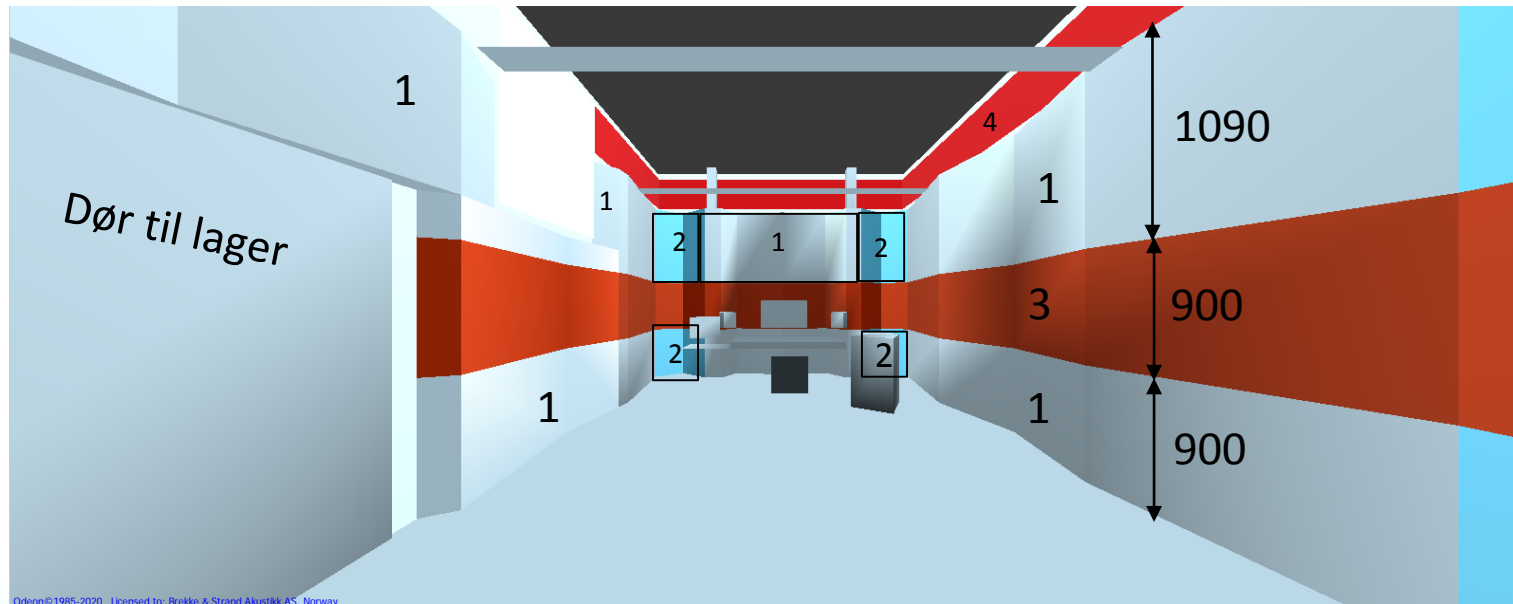
C:\Odeon16Combined\Rooms\Tromsø\kontrollrom.DXF has been created.

This geometry contained 4 surfaces with more than 4 points each.
- the surfaces defined from more than 4 point were exported as closed 3D POLYLINE's
- to make these surfaces respond to the HIDE and RENDER command, use the REGION command from within the CAD program.

GL-view visualisering

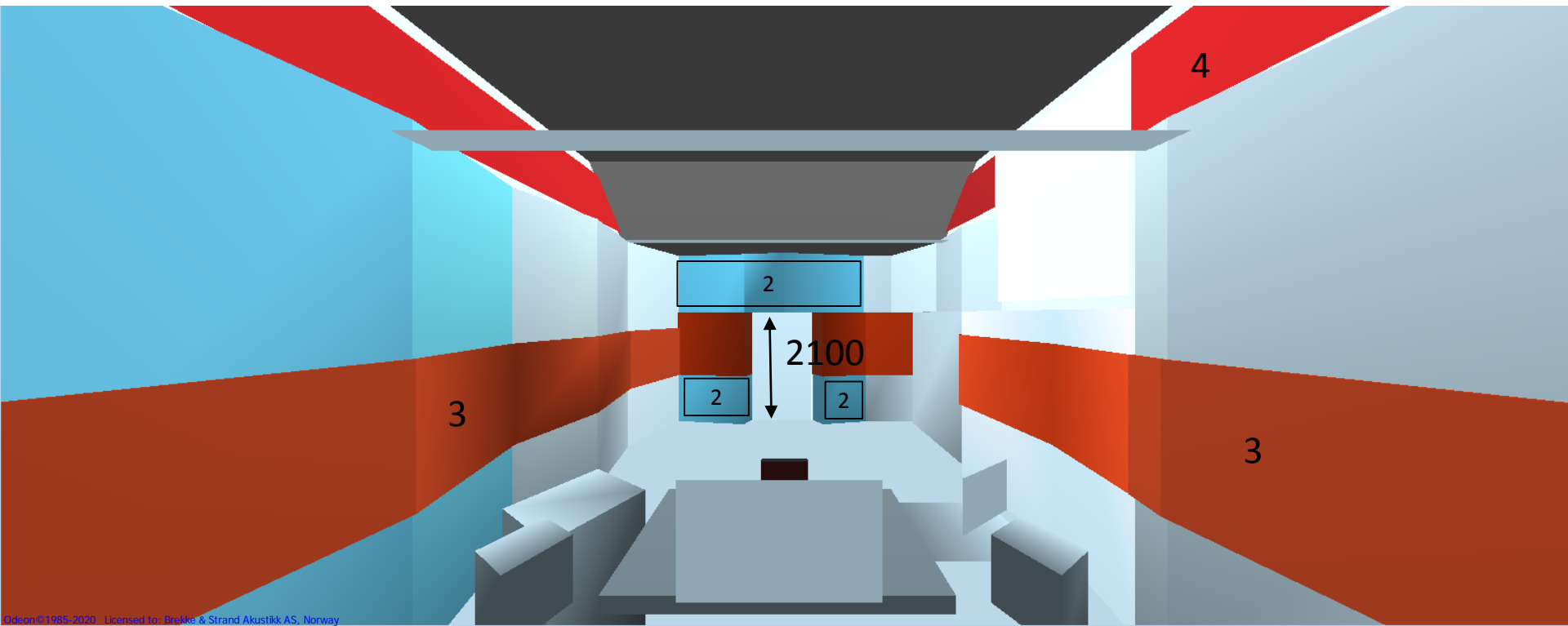


GL-view, sett fra døra, mot miksepulten



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Sett forfra mot døra



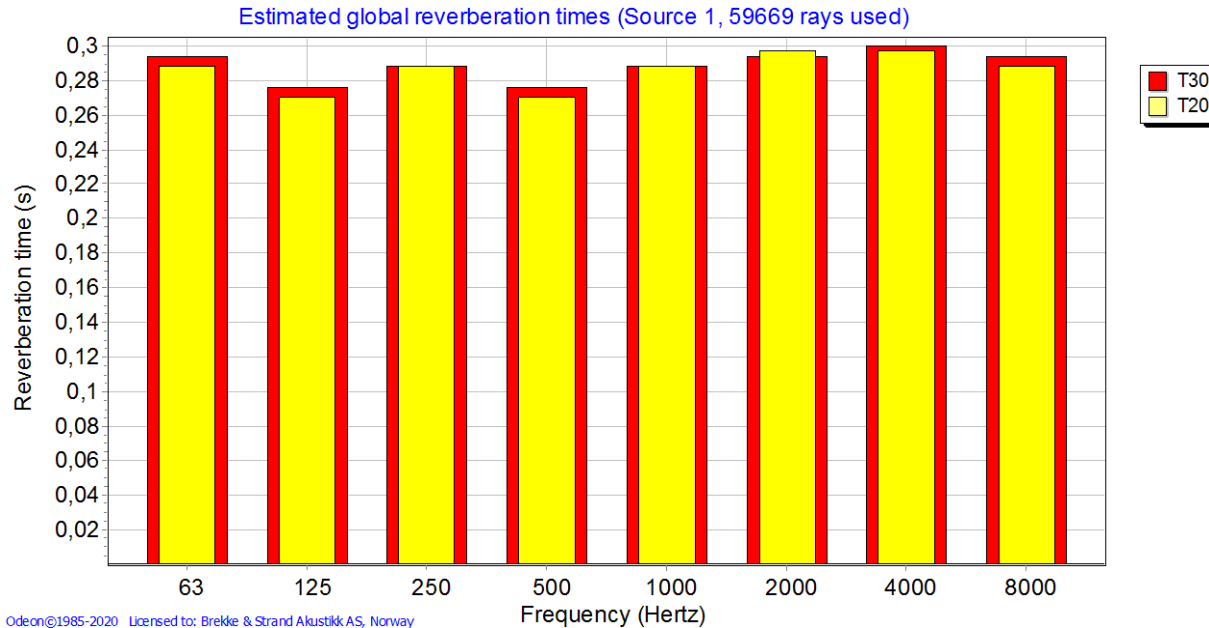
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Kontrollrom: Typer og mengder i modellen

Type	Overflate beskrivelse	m2
0	Himling 600x600 plater 50% 40mm Ecophon Master, 50% gipsplater	31
1	Trepanel 14x120 not-og-fjær	37
2	Spaltepanel 21x120 cc124 (4mm spalt) foran gj.sn 200mm med min.ull	28
3	30 Mineralull, fiberduk, 14*28 halvstaff cc70	24
4	Ecophon Master 40x600x600, striper limt gipsvegg	8

Mengdene er netto, u/ listverk, spikerslag og foringer til trepanel, eller tillegg for toleranser, kapp og svinn

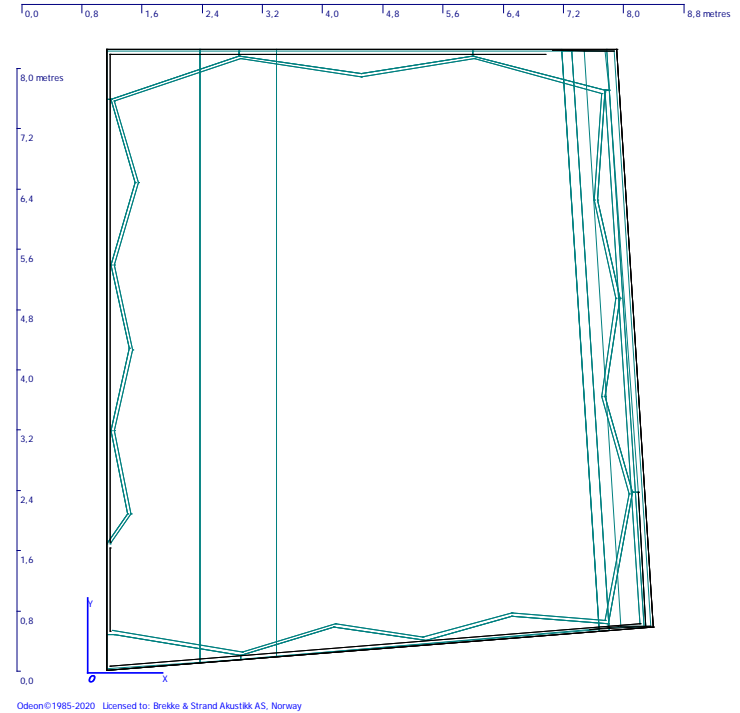
Etterklangstidspekter simulert i modellen



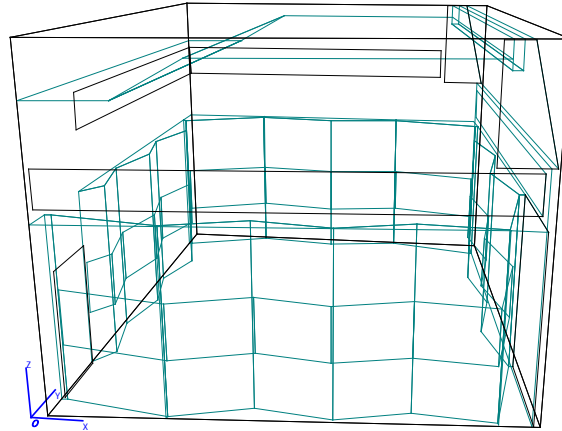
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Slagverkrommet

Slagverkrommet: omriss i horisontalplanet



Trådmodell



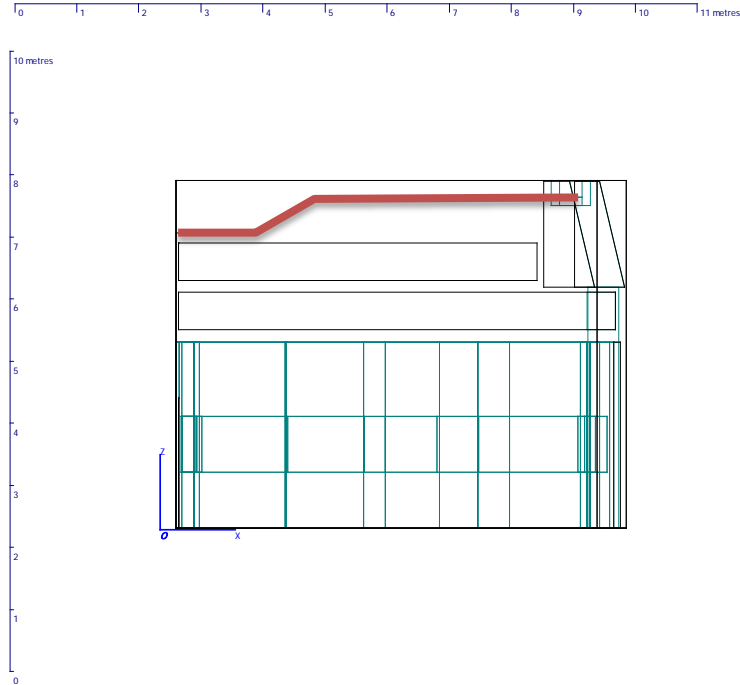
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Type 0_Himling

Eksisterende himlingshøyde beholdes, markert på snitt t.h.

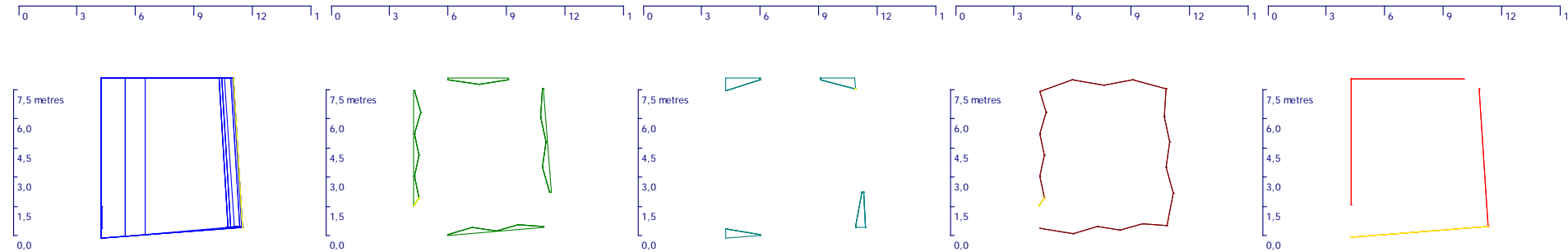
Bæresystemet kan beholdes eller erstattes med nytt.

Nye 600x600 himlingsplater:
50% 40mm Ecophon Master
og 50% gipsplater (tykkelse 6-13mm), fordelt i sjakkemønster.



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Veggelementer type 1, 2, 3 og 4



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Omriss av rommet

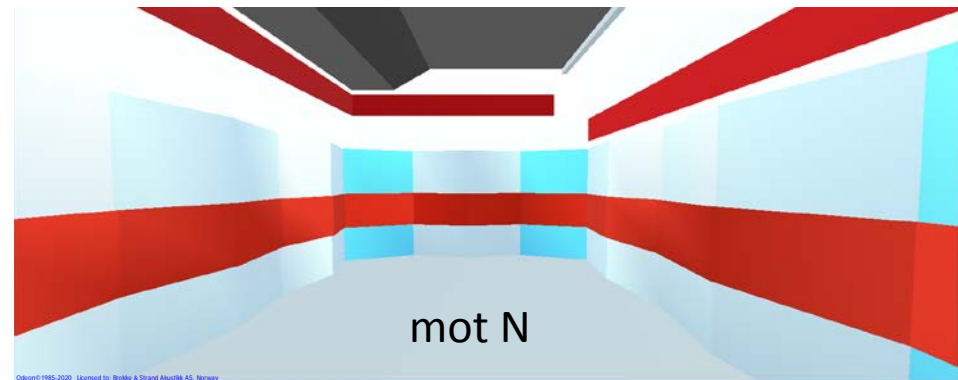
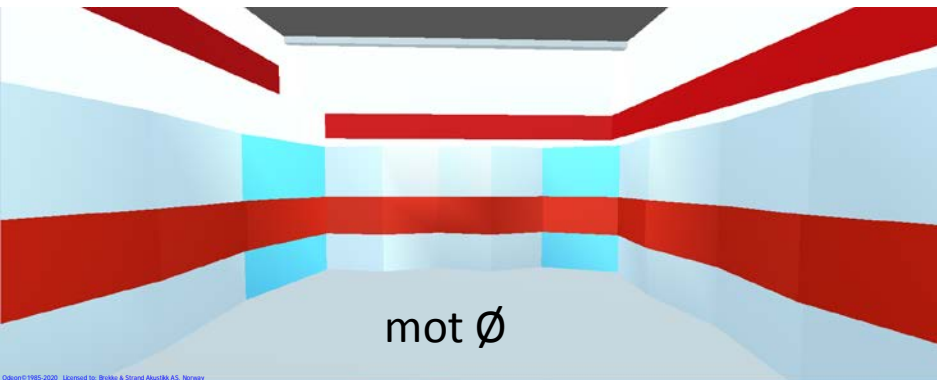
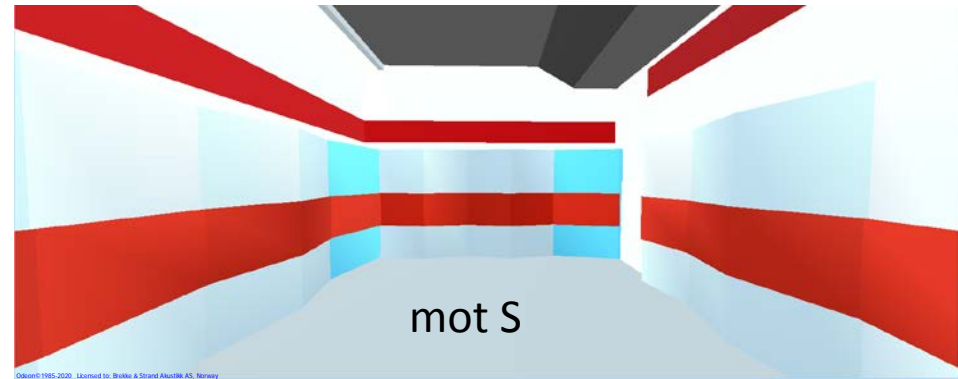
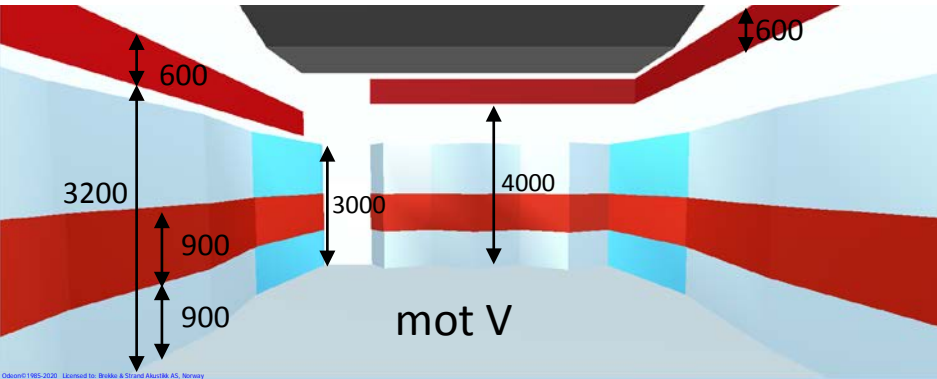
Type 1 Furupanel not-og-fjær
14x120

Type 2 Spaltepanel
21x120 cc124

Type 3 30mm mineral- eller treull, vevd duk, 12x21 halvstaff cc 35 (spalt=14)

Type 1
40x600x600 Ecophon
Master limt på gipsvegg

GL-view inne i modellen av Slagverkrommet

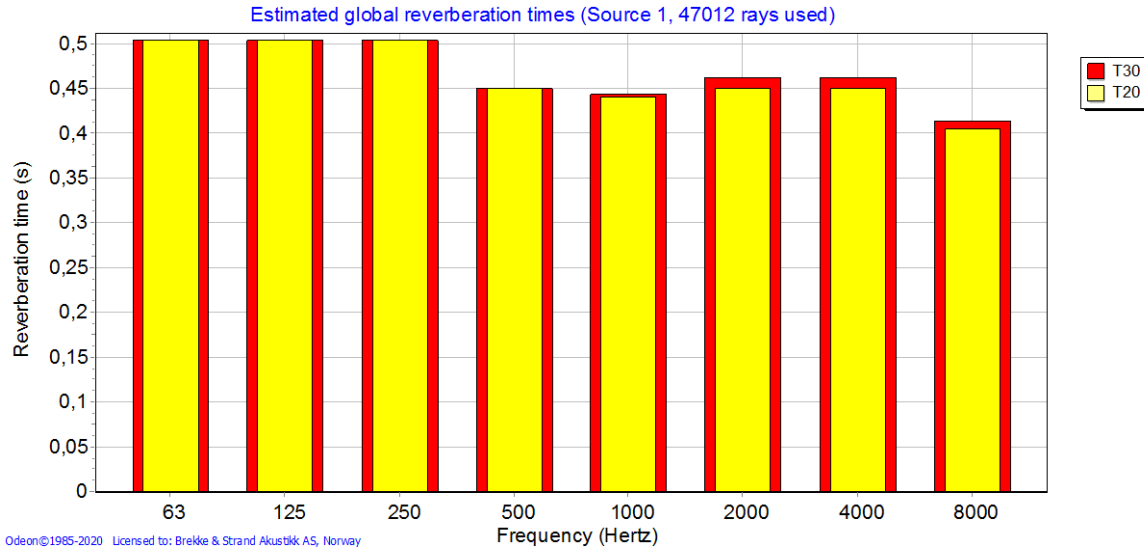


Slagverkrom: Typer og mengder i modellen

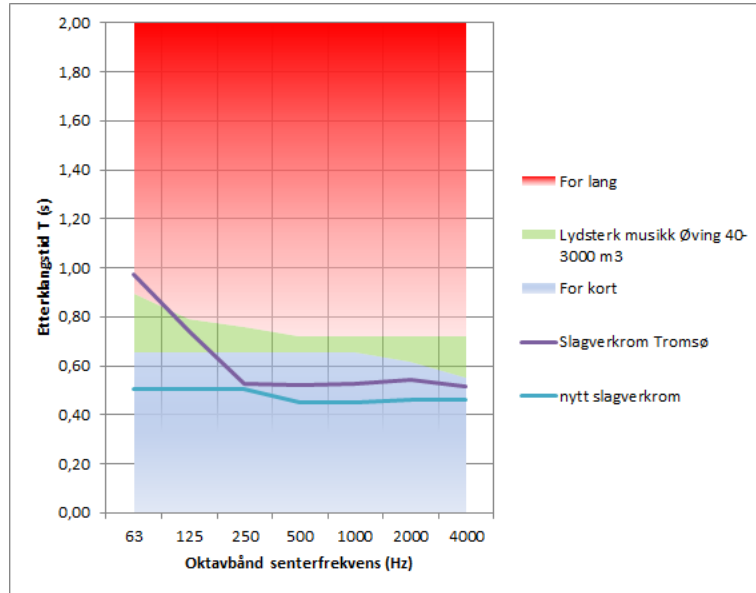
Type	Overflate beskrivelse	m2
0	Himling 600x600 plater 50% 40mm Ecophon Master, 50% gipsplater	52
1	Trepanel 14x120 not-og-fjær, høyde 0-3000 o.g.	63
2	Spaltepanel 21x120 cc124 (4mm spalt) foran gj.sn 200mm med min.ull	31
3	30 Mineralull, fiberduk, 12*21 halvstaff cc35	24
4	Ecophon Master 40mm på gipsvegg	16

Mengdene er netto, u/ listverk, spikerslag og foringer til trepanel, eller tillegg for toleranser, kapp og svinn

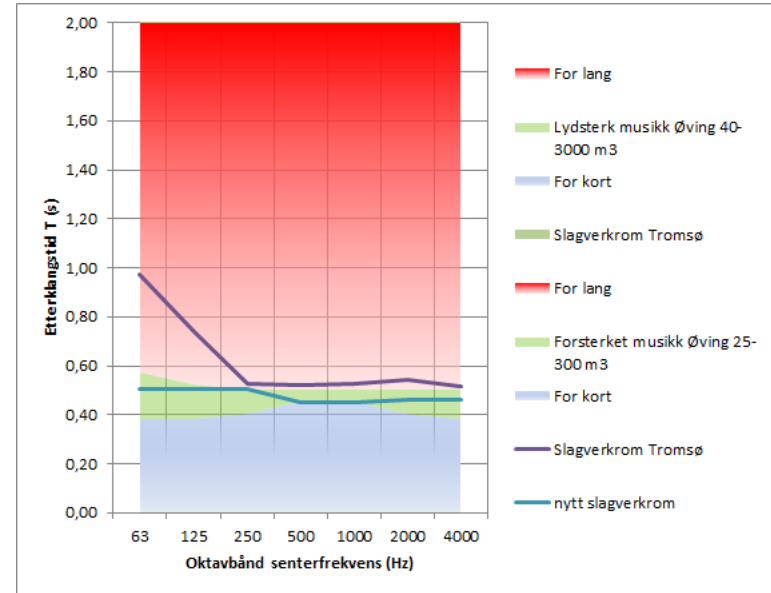
Etterklangstidspekter i Slagverksrom



Slagverkrom: Vurdering re NS8178



Vurdert som øverom for Lydsterk Musikk etter NS8178 er eksisterende etterklangstid for kort.



I diagrammet over er eksisterende rom "Slagverkrom Tromsø" vurdert som øverom for Forsterket Musikk etter NS8178. Det er litt for mye etterklang, i samsvar med tilbakemeldingen fra Bruker. Simulering av "nytt slagverkrom" er innenfor toleransene (grønt felt)

Inspirasjon: Trepanel-vegg med sik-sak-form



Furupanel not-og-fjær glattpanel



Liggende



Stående



Benyttes enten ubehandlet eller behandlet med beis før bygging

NB! Maling vil endre de akustiske egenskapene og må ikke benyttes.

Eksempler type og pris 50m² trepanel:

Furu glattpanel 14x120 NOK 7.500 eks.mva