Technology in teaching
Digital skitsering for arkitekter

Det Kongelige Akademi

Arkitektur
Design
Konservering

kglakademi.dk

Technology in teaching
Baggrund

KUB · U

Morten Myrup, ark. maa

- Arkitektskolen i København, Karch senere KADK, IT-undervisningen 2006-
- Kurser for ledige i byggebranchen med Daniel Nielsen, Green-/EarlyBIM for KADK og DTU Ballerup 2011
- Centre for IT and Architecture, KADK 2014
- Revitundervisning for arkitektstuderende 2016-
- BIMkontoret CAS, DTU 2016
- Større BIM-projekter for private og offentlige bygherrer 2018-
- Det Kongelige Akademi, IT-undervisning for designere og arkitekter
- KUB-U efteruddannelse for undervisere i byggebranchen / Digitalt Løft for undervisere på Akademiet

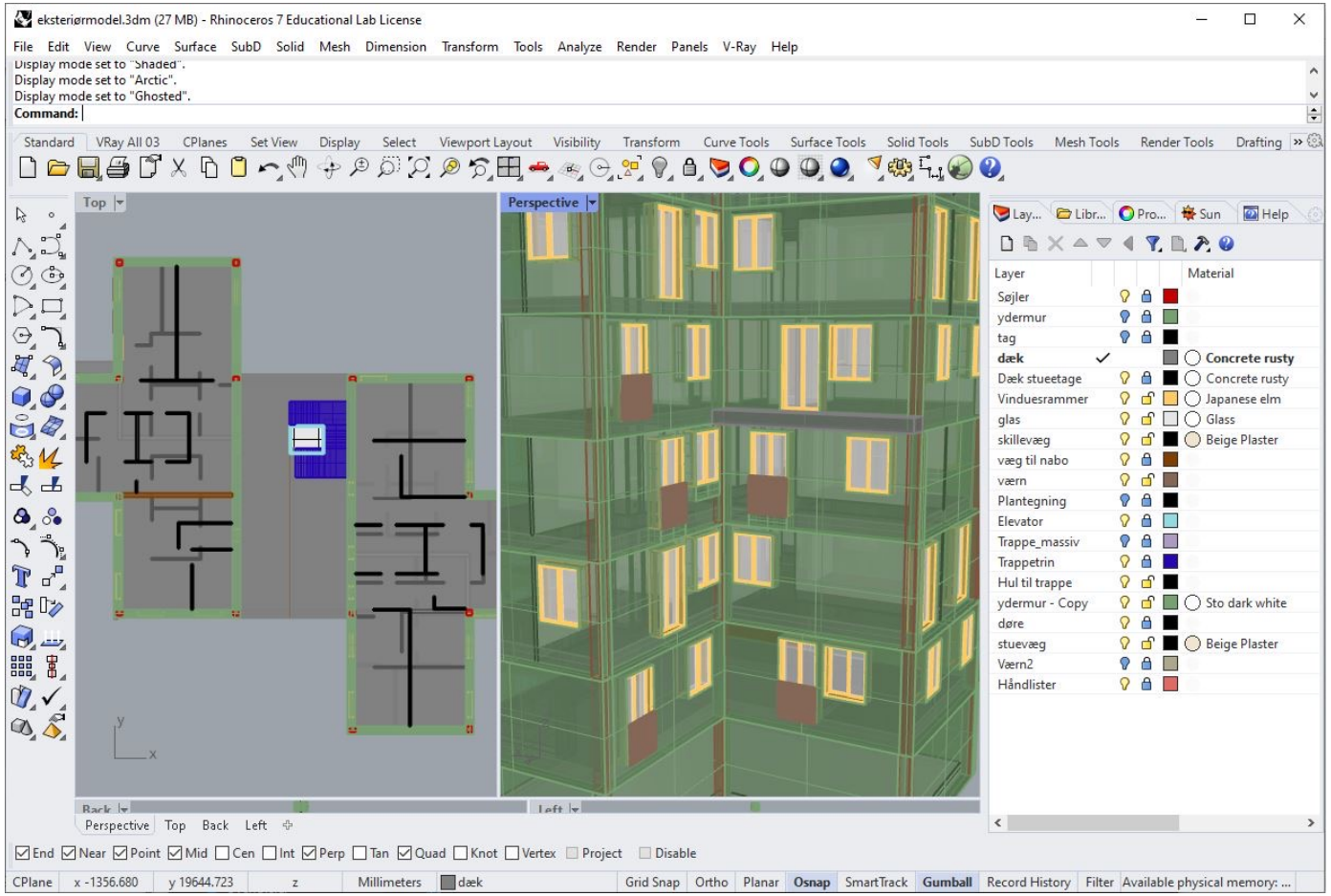
Technology in teaching
Visualization

KUB · U

At the Institutes of Architecture digital models are produced from the freshman year onward

Purposes

- Sketching
- Production (lasercut, milling, 3d print)
- Drawings in scale
- Visualizations



Cecilie Høgsberg Knudsen, 1st year IBT, spring 2021

Technology in teaching
Visualization

KUB · U

At the Institutes of Architecture digital models are produced from the freshman year onward

Computer software goes a long way

- 3D models
- Render engine
- Image manipulation
- Photo collages

Frederik Hedely Jansen, 2nd year IBK, spring 2021

Amalie Skjellerup Bang, 2nd year IBK, spring 2021

Technology in teaching
Prototyping

KUB · U

At Design, Programme for Crafts in Glass and Ceramics, technology is introduced early on

Prototyping with original materials

Experimenting with machine technology challenges and inspires the craftsman

Ceramics printing at the Digital and Analouge Technologies Workshop, Nexø, Bornholm

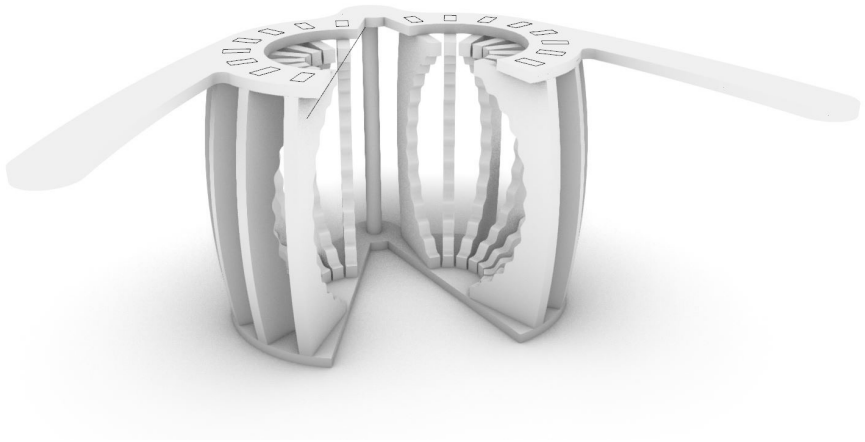
Technology in teaching
Prototyping tools

KUB · U

At Design, Programme for Crafts in Glass and Ceramics, technology is introduced early on

Building moulds for experiments

- Sketching with digital models
- Laser cutting parts
- Blowing glass in custom moulds



Glass blowing in custom mould at the Digital and Analogue Technologies Workshop, Nexø

Technology in teaching
Prototyping

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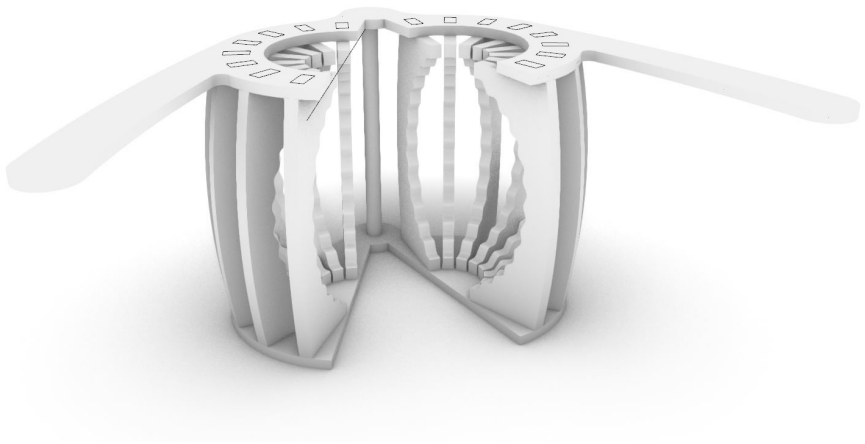

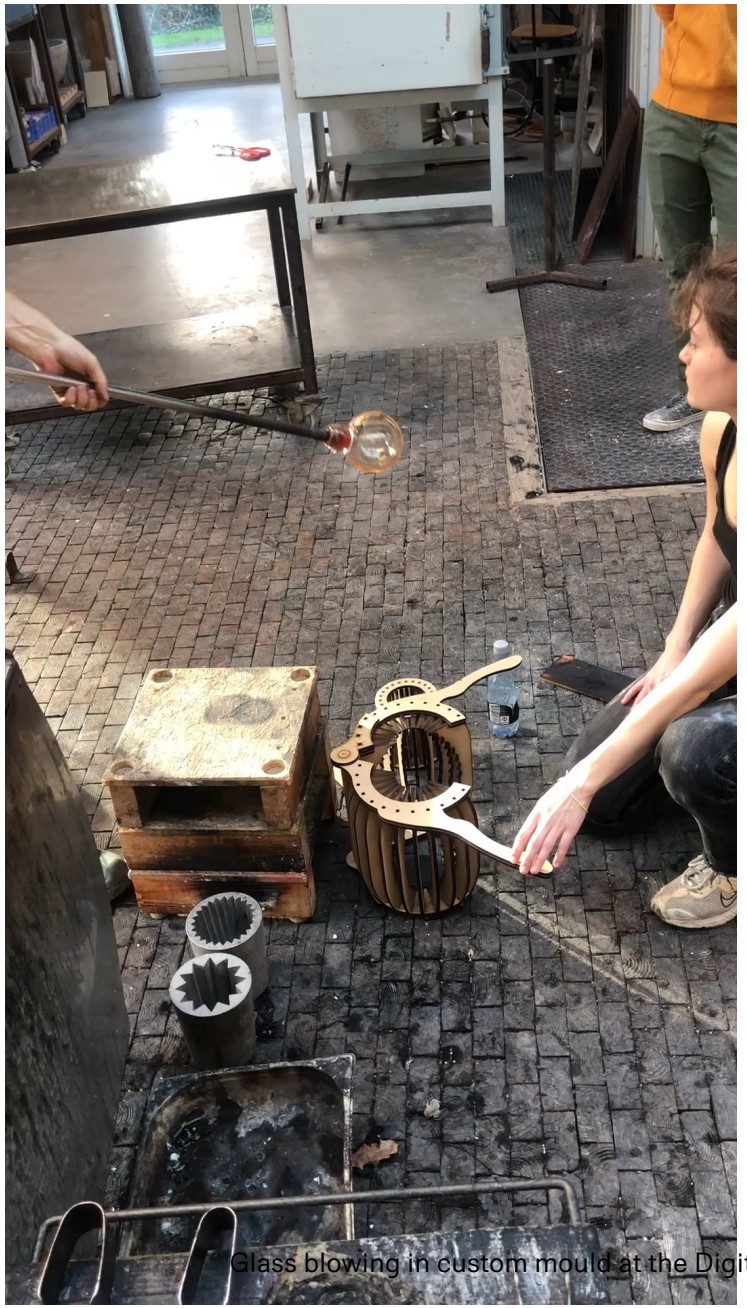

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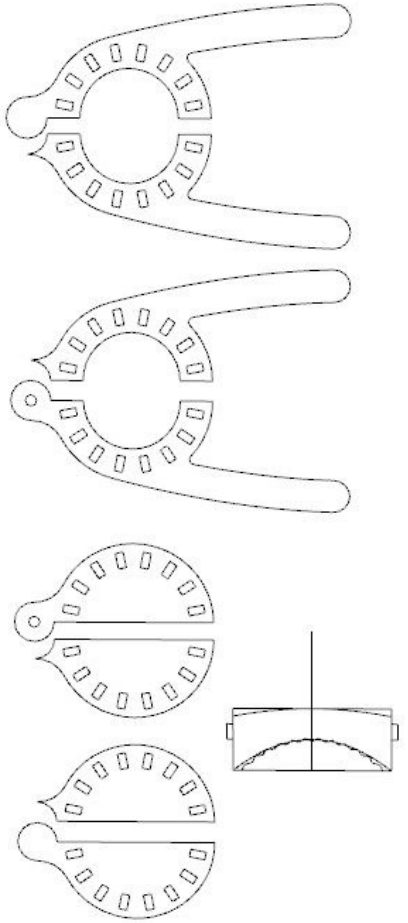

Technology in teaching
Patternmaking

KUB · U

At the Fashion Programme students use computer software for simulation of patterns and fit.

Prototyping with original materials

- Dialectic btw analogue and digital
- Technology potentially eliminate samples
- Bespoke vs ready-to-wear

Ehab Liljeblad, Fashion and Textiles, Product+, 2nd year IBD, spring 2021

Technology in teaching
Prototyping

KUB · U

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Ehab Liljeblad, Fashion and Textiles, Product+, 2nd year IBD, spring 2021

Technology in teaching
Prototyping

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Ehab Liljeblad, Fashion and Textiles, Product+, 2nd year IBD, spring 2021


SIGILLUM REGIÆ ACADEMIÆ PICTOR: SCULPTOR: ARCHITECTORUMQVE

”Objektorienteret 3D modellering” 2005-2008

Ballerup – Haslev – København, ét semester

KUB · U

Arkitektstuderende leverede skitseprojekt

Ingeniørstuderende beregnede konstruktioner

Konstruktørstuderende beregnede mængder

Samarbejde mellem Ingeniørhøjskolen i Ballerup,
Arkitektskolen i København og Konstruktørskolen i Haslev

Ark: ”Ingen ku´ finde ud af at bruge det. Gumpetungt og rigidt”

DET DIGITALE BYGGERI
implementerings:netværket

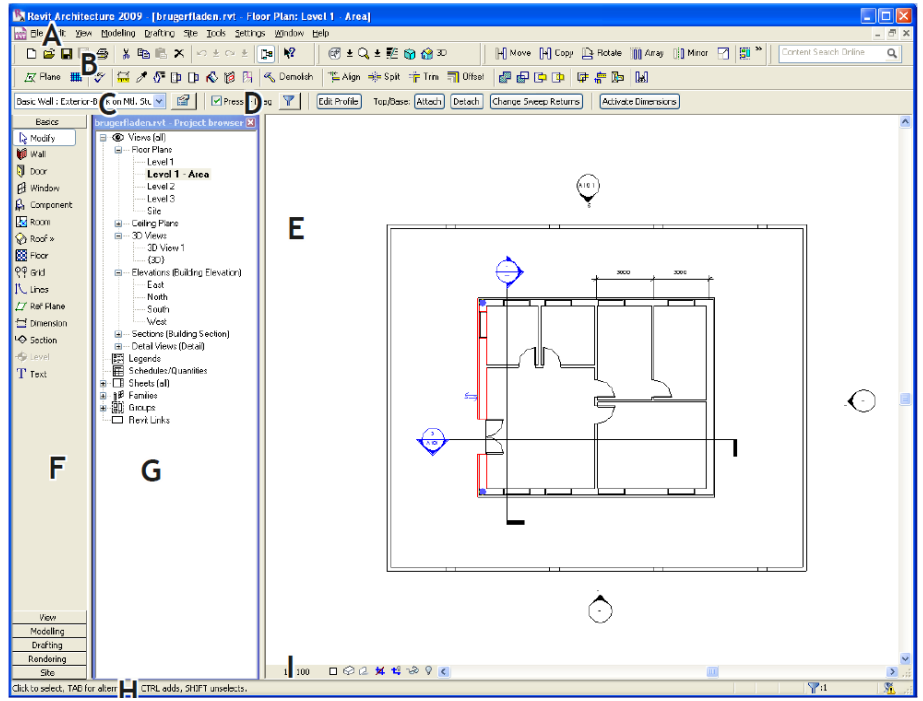
DEN EUROPÆISKE UNION

Den Europæiske Socialfond

Brugerfladen

Autodesk Revit Architecture brugerfladen er inddelt i 9 områder:

Menubar (A): Indeholder de mest almindelige komandoer.
Toolbars (B): Hurtig adgang til ofte brugte funktioner.
Type Selector (C): Her vælges elementer.
Options Bar (D): Flere indstillingsmuligheder for valgte element.
Drawing Area (E): Arbejdsvindue/r.
Design Bar (F): Design værktøjer.
Project Browser (G): Viser Views, Families og komponenter m.m.
Status Bar (H): Viser bla. tool tips til valgte element / komando.
Viewport Controls (I): Grafiske visningsmuligheder i Viewports.

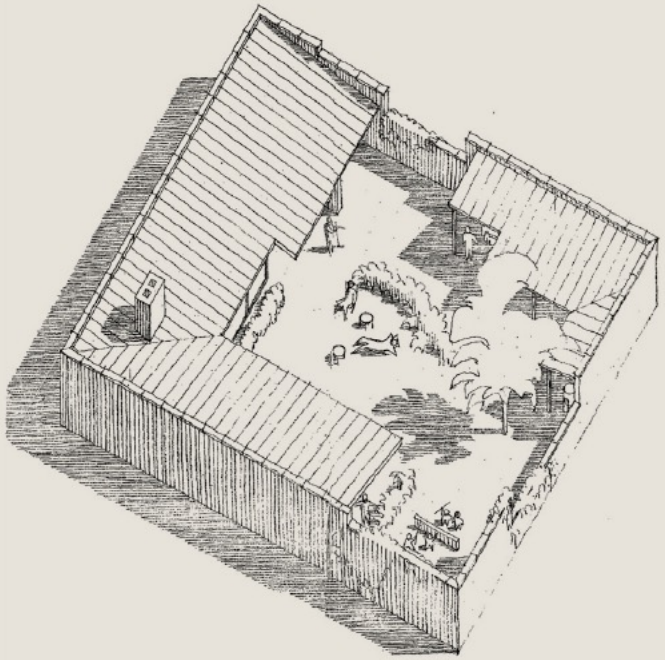


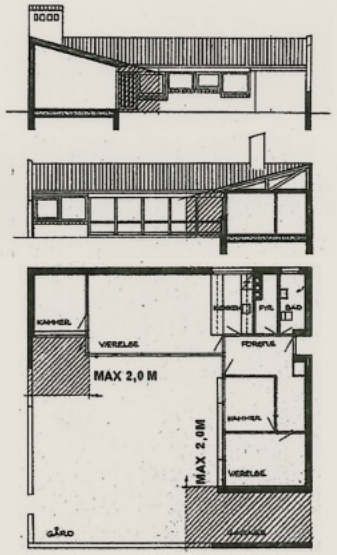
”BIM med Revit”, Anette Kreutzberg, 2008
(50 siders kompendium)

Kurser for ledige 2011

Romerhus i Revit

Kingohusene (1957) - Jørn Utzon





Kurser for ledige 2011

Romerhus i Revit

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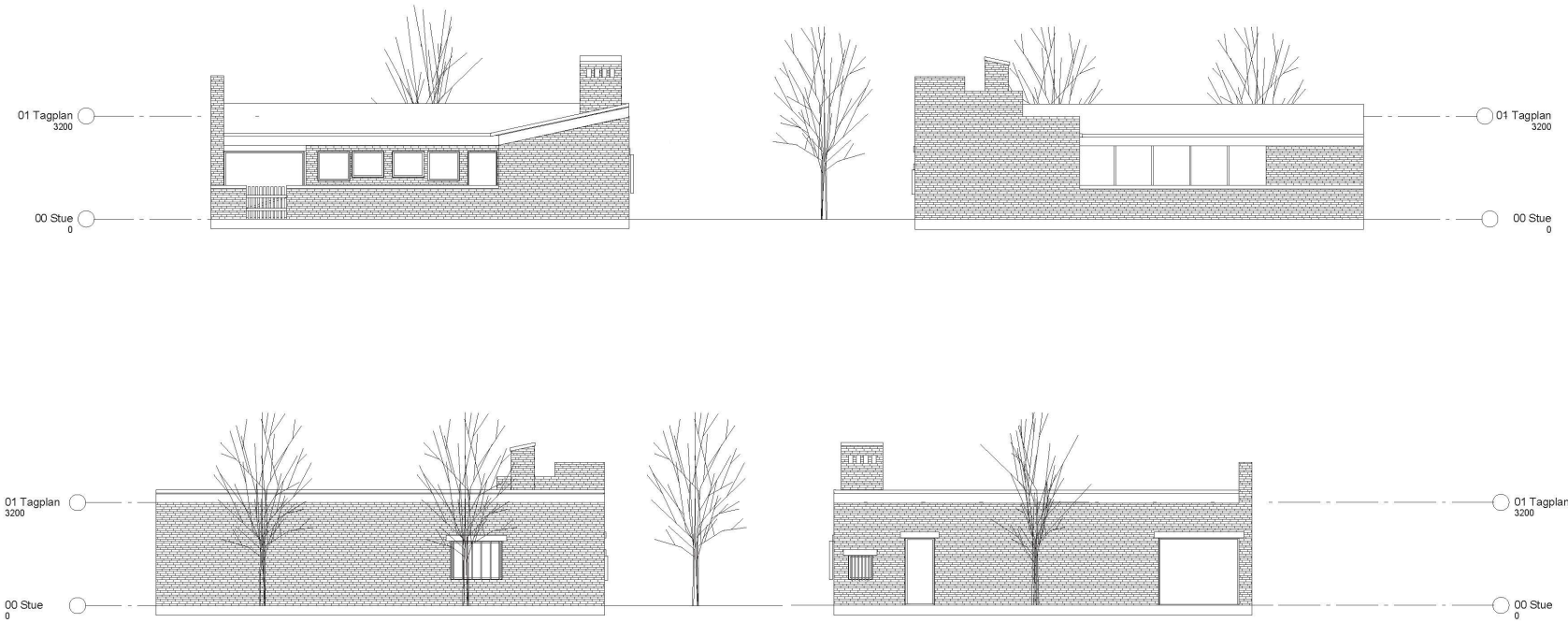


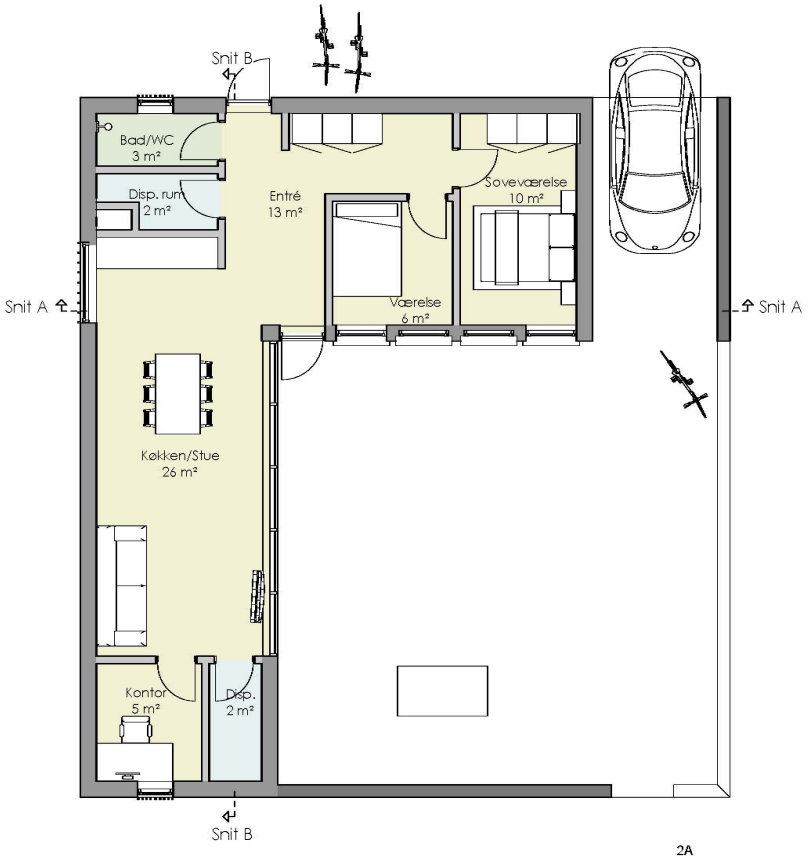
Kurser for ledige 2011

Romerhus i Revit

KUB · U

DIGITALT BYGGERI OG PROJEKTERING - KINGOHUSENE

EFTERUDDANNELSES KURSUS/v. Morten Myrup Jensen
KUNSTAKADEMIETS ARKITEKTSKOLE
14.03.2011 - 01.04.2011



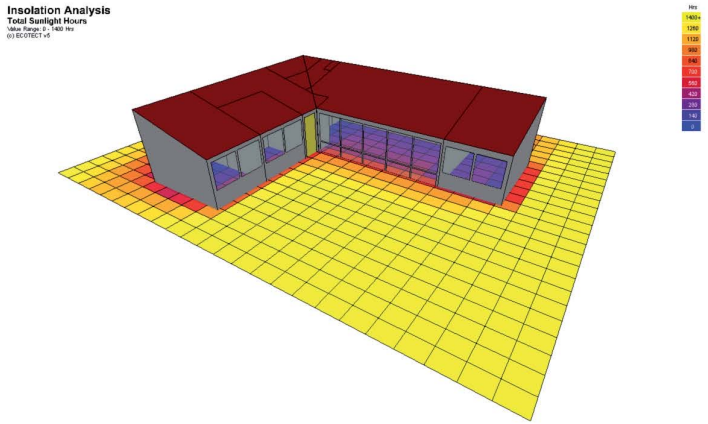
MORTEN SCHAARUP

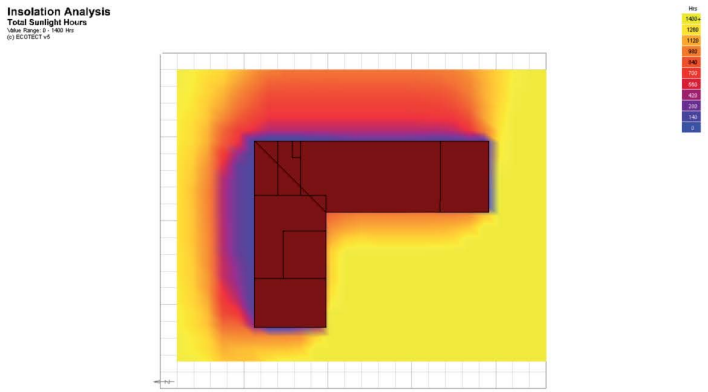
Kurser for ledige 2011

Romerhus i Ecotect Analysis

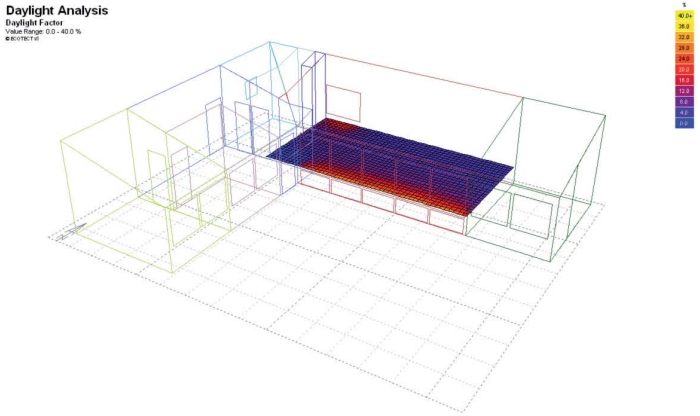
KUB · U

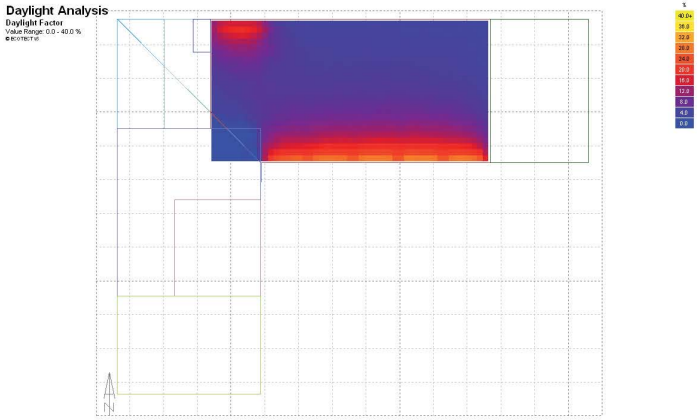
* DIREKTE SOLLYS / GENNEMSNIT TIMER





* DAGSLYSNIVEAU 700mm STUE





Kurser for ledige 2011

Romerhus i Ecotect Analysis

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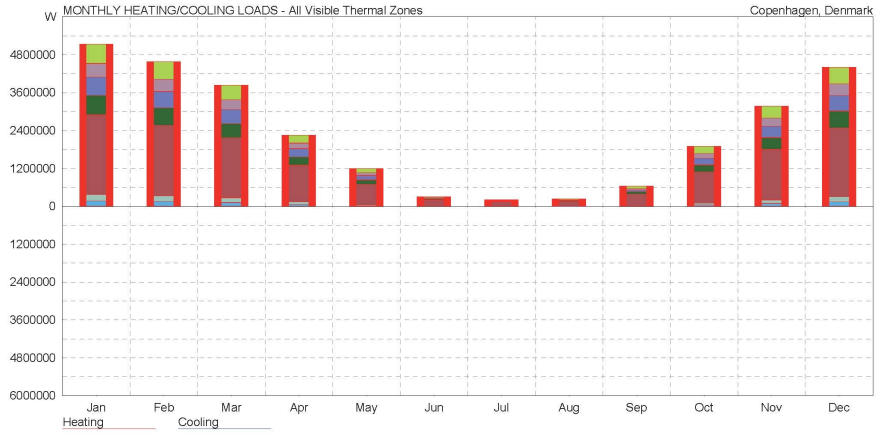
✻ TERMISK ANALYSE



ENERGIFORBRUG MED OPRINDELIGE MATERIALER

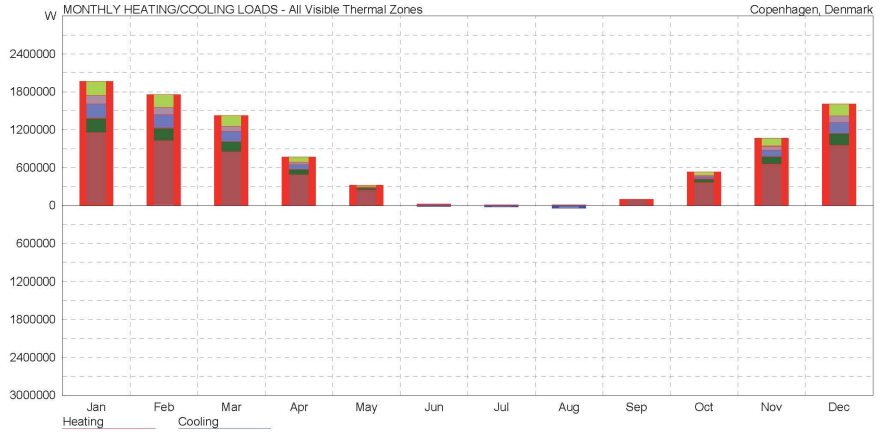
MONTHLY HEATING/COOLING LOADS

All Visible Thermal Zones
Comfort: Zonal Bands

Max Heating: 12028 W at 06:00 on 18th February
Max Cooling: 2849 W at 13:00 on 21st August

MONTH	HEATING (Wh)	COOLING (Wh)	TOTAL (Wh)
Jan	5146180	0	5146180
Feb	4581985	0	4581985
Mar	3835790	0	3835790
Apr	2261188	0	2261188
May	1192530	0	1192530
Jun	309757	0	309757
Jul	211830	0	211830
Aug	230928	2862	233789
Sep	638506	0	638506
Oct	1898169	0	1898169
Nov	3179137	0	3179137
Dec	4413126	0	4413126
TOTAL	27899126	2862	27901988
PER M²	315601	32	315633
Floor Area:	88.400 m2		

ENERGIRENOVERING MED ISOLERING I YDERVÆG(80mm ROCKWOOL) SAMT TAG (300mm ROCKWOOL). UDSKIFTNING AF VINDUER TIL LAVENERGI TERMOVINDUER



ENERGIFORBRUG EFTER ENERGIRENOVERING

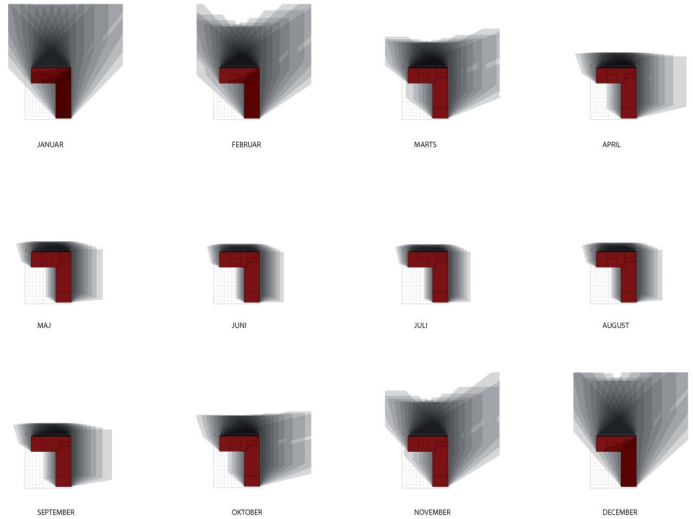
MONTHLY HEATING/COOLING LOADS

All Visible Thermal Zones
Comfort: Zonal Bands

Max Heating: 4970 W at 06:00 on 18th February
Max Cooling: 453 W at 09:00 on 21st August

MONTH	HEATING (Wh)	COOLING (Wh)	TOTAL (Wh)
Jan	1969702	0	1969702
Feb	1759941	0	1759941
Mar	1424219	0	1424219
Apr	770894	0	770894
May	318498	0	318498
Jun	26383	19567	459
Jul	12532	26831	393
Aug	12112	42027	541
Sep	97371	0	97371
Oct	533155	0	533155
Nov	1065828	0	1065828
Dec	1610311	0	1610311
TOTAL	9600946	88425	968
PER M²	108608	1000	109608
Floor Area:	88.400 m2		

✻ SKYGGE ANALYSE



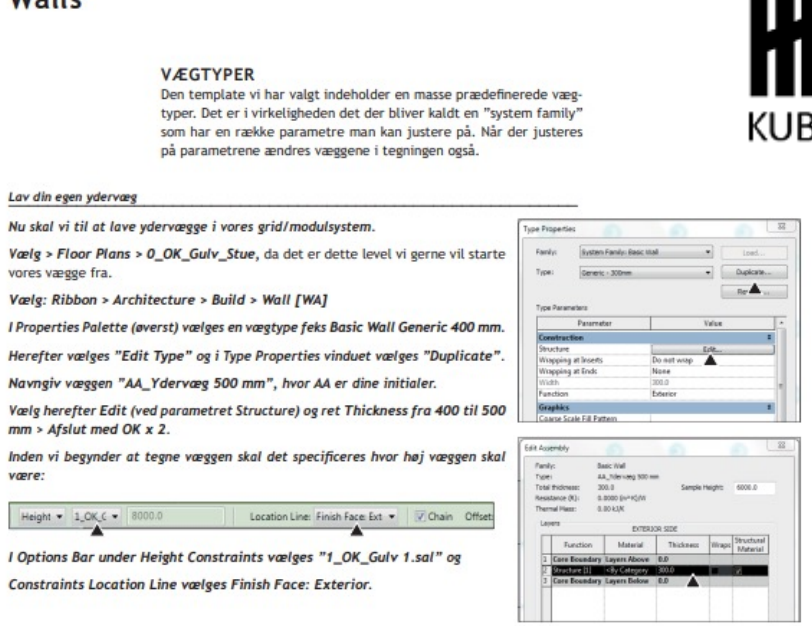
Revit for arkitektstuderende 2015
Projekteringsfokus, 2 uger

KUB · U

Arkitektstuderende lærer om

CCS-koder, modullinjer, levels,
mængdeberegninger, farveskemaer,
designoptions, massing og
avancerede families

Ark: ”Ingen ku´ finde ud af at bruge det. Gumpetungt og rigidt”


Walls

VÆGTYPER

Den template vi har valgt indeholder en masse prædefinerede væg-typer. Det er i virkeligheden det der bliver kaldt en "system family" som har en række parametre man kan justere på. Når der justeres på parametrene ændres væggene i tegningen også.

Lav din egen ydervæg

Nu skal vi til at lave ydervægge i vores grid/modulsystem.

Vælg > Floor Plans > 0_OK_Gulv_Stue, da det er dette level vi gerne vil starte vores vægge fra.

Vælg: Ribbon > Architecture > Build > Wall [WA]

I Properties Palette (øverst) vælges en vægtype feks Basic Wall Generic 400 mm.

Herefter vælges "Edit Type" og i Type Properties vinduet vælges "Duplicate".

Navngiv væggen "AA_Ydervæg 500 mm", hvor AA er dine initialer.

Vælg herefter Edit (ved parametret Structure) og ret Thickness fra 400 til 500 mm > Afslut med OK x 2.

Inden vi begynder at tegne væggen skal det specificeres hvor høj væggen skal være:

I Options Bar under Height Constraints vælges "1_OK_Gulv 1.sal" og

Constraints Location Line vælges Finish Face: Exterior.

Tegn Stueplan

Tegn grundplanen som vist:

For at tegne den runde mur brug Ribbon>Modify Place Wall>_Draw>Start-End-Radius-Arc. og klik 1-2-3, som vist.

Klik på "hundehuset" i Quick Acces Toolbar for at se modellen i et 3D view. Skift tilbage til plan view ved at dobbelt klikke på 0_OK_Gulv_Stue i Project Browser.

fortsæt denne vej

start

18 REVIT 2016 V1.2, KADK - ARKITEKTSKOLEN, IBD © 2015

”Revit 2016 Kompendium, Ture Bundgaard m.fl., 2015
(100 siders kompendium inkl. bilag)

DEN EUROPÆISKE UNION

Den Europæiske Socialfond

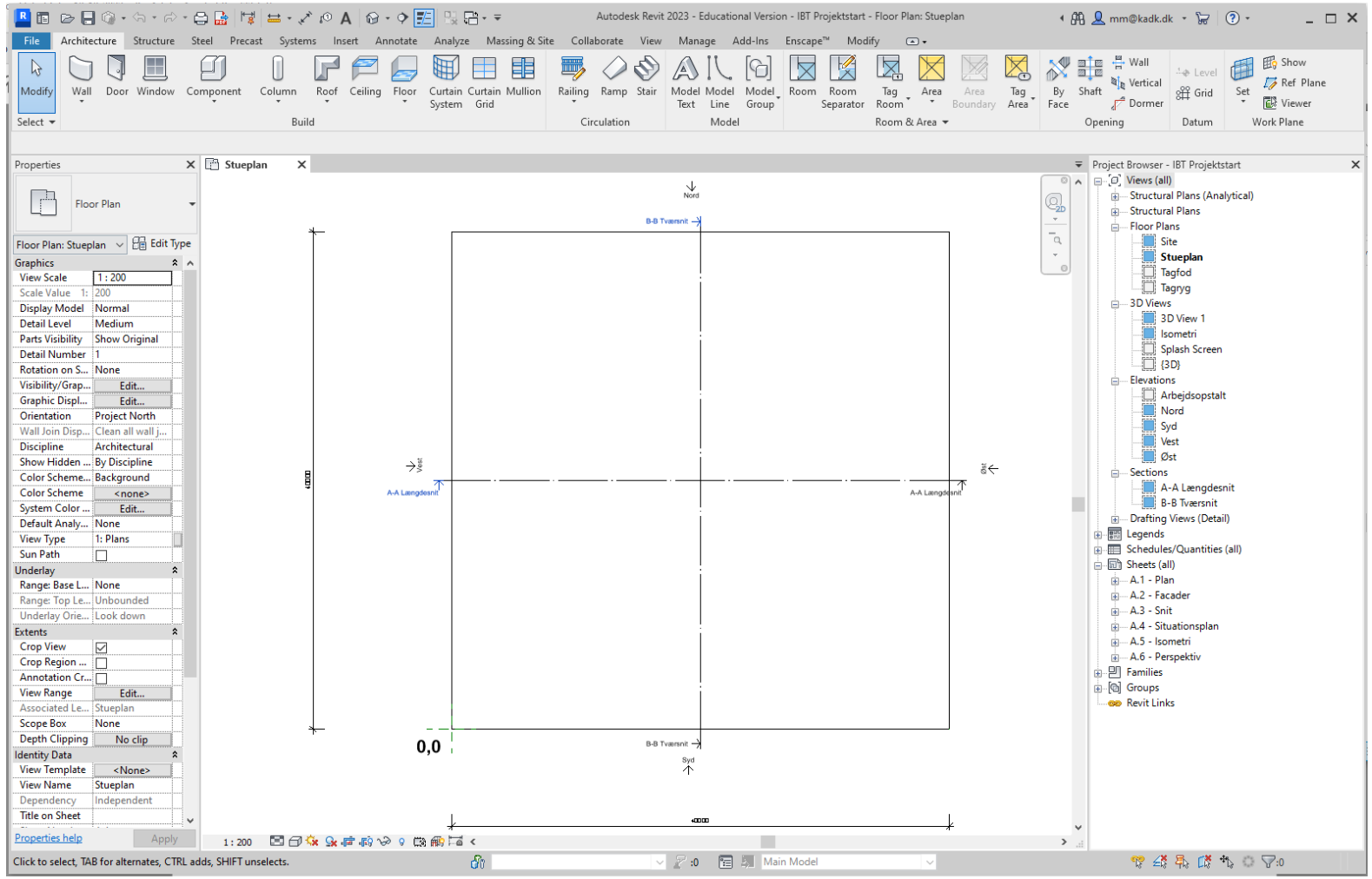
cuneco

center for produktivitet i byggeriet

Revit for arkitektstuderende 2022

Skitsér og tegn op – 5 dage

KUB · U



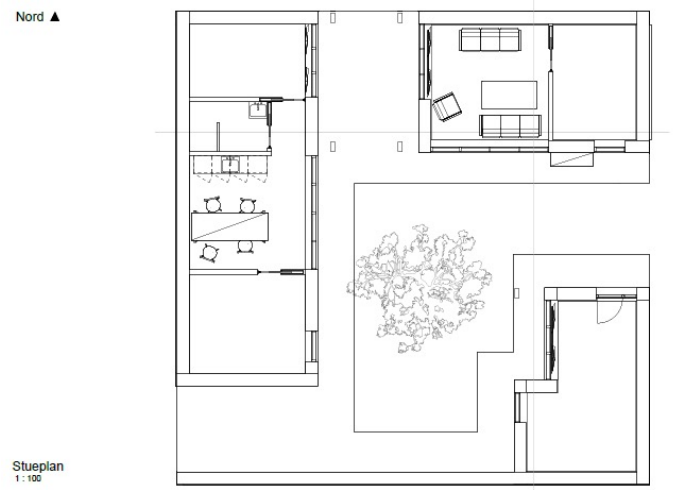
Template baseret på DanEDU 2023

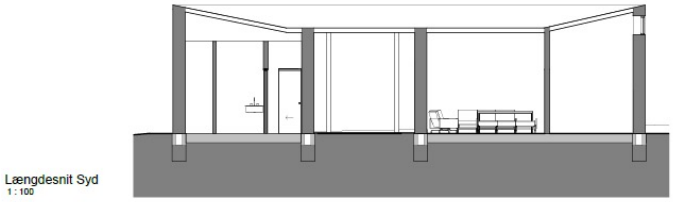
Erik Falk Jørgensen

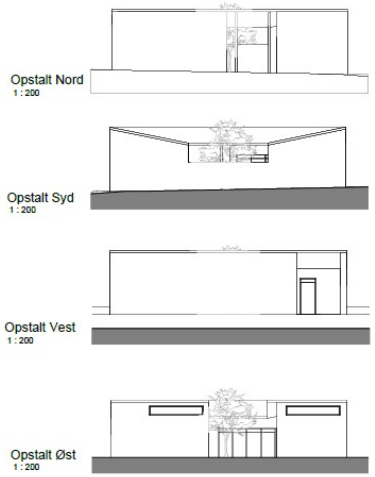
Revit for arkitektstuderende 2022

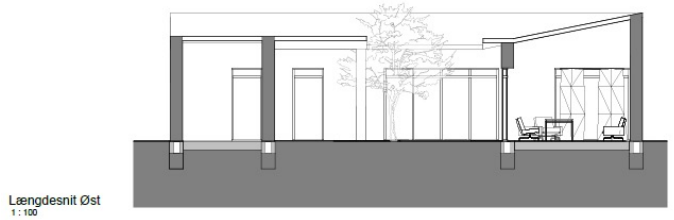
Romerhus i Revit – skitsér selv, dag 2

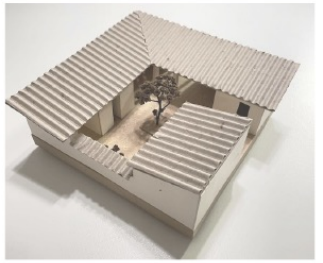
KUB · U









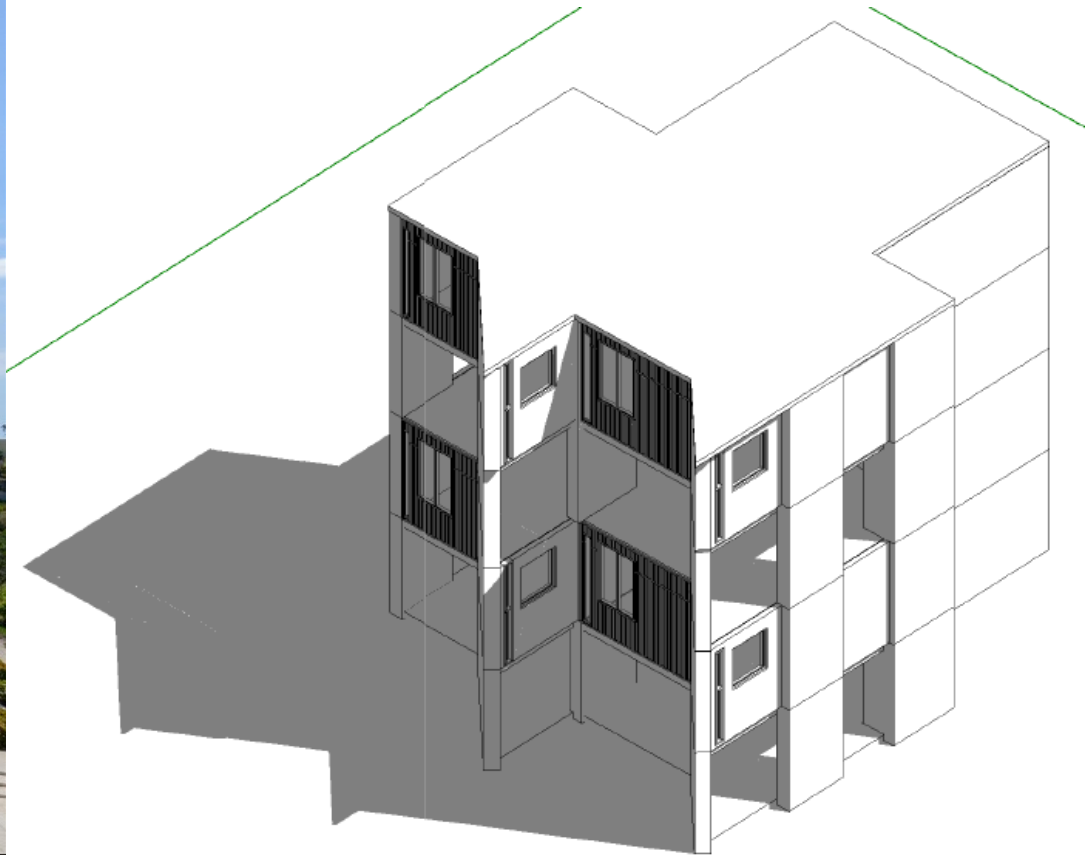


Felix Lollike Knowlton, IBT, 2022

Revit for arkitektstuderende 2022

Salk Institute – Louis Kahn

KUB · U



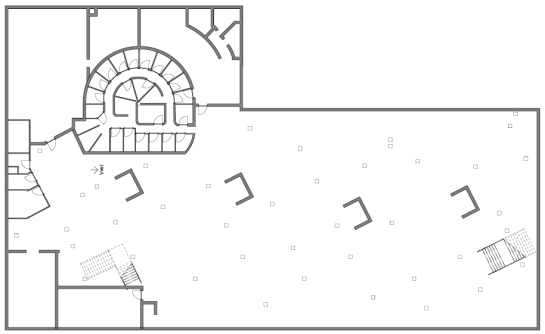
Anna Sørensen, IBT, 2022

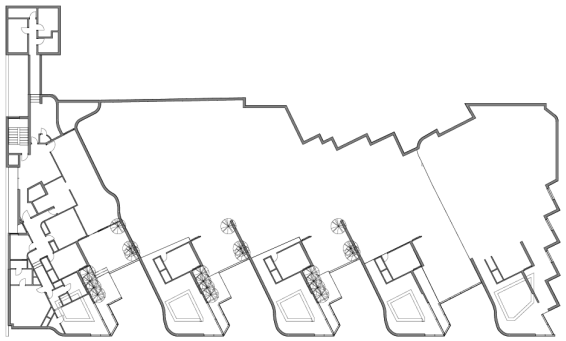
Revit for arkitektstuderende 2022

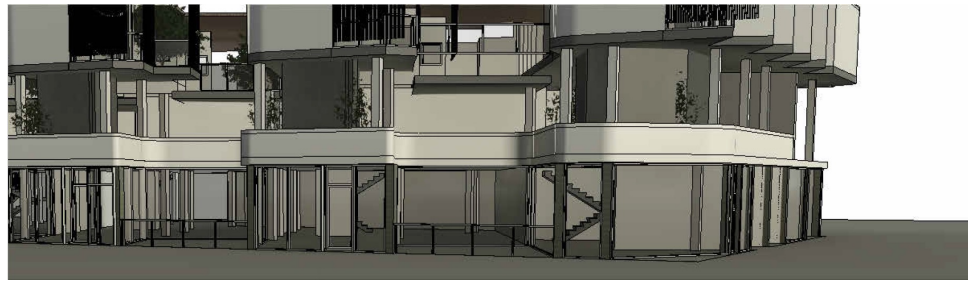
Girasol – Antonio Coderch

KUB · U

x 6







Emilie Sloth Lauridsen, IBT, 2022

Revit for arkitektstuderende 2022

Børglum Kollegiet - Salling-Mortensen, Niepoort

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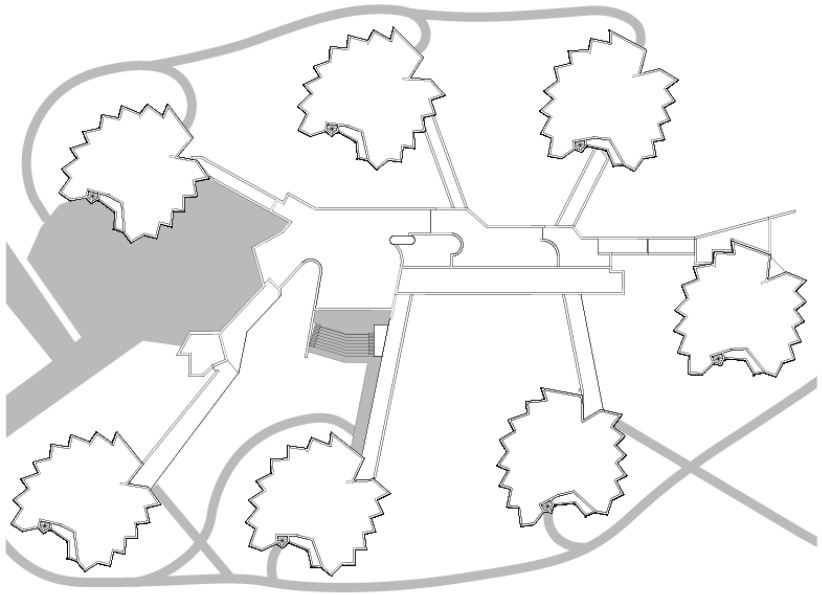
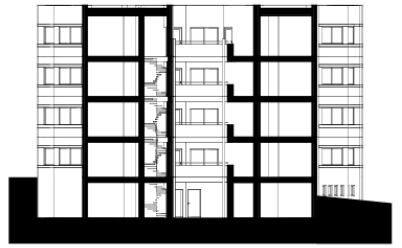
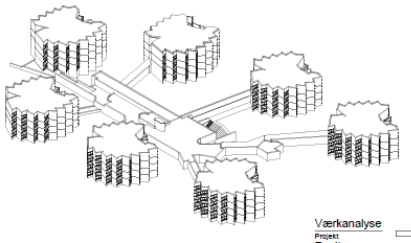
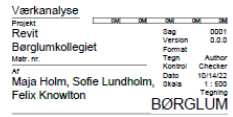






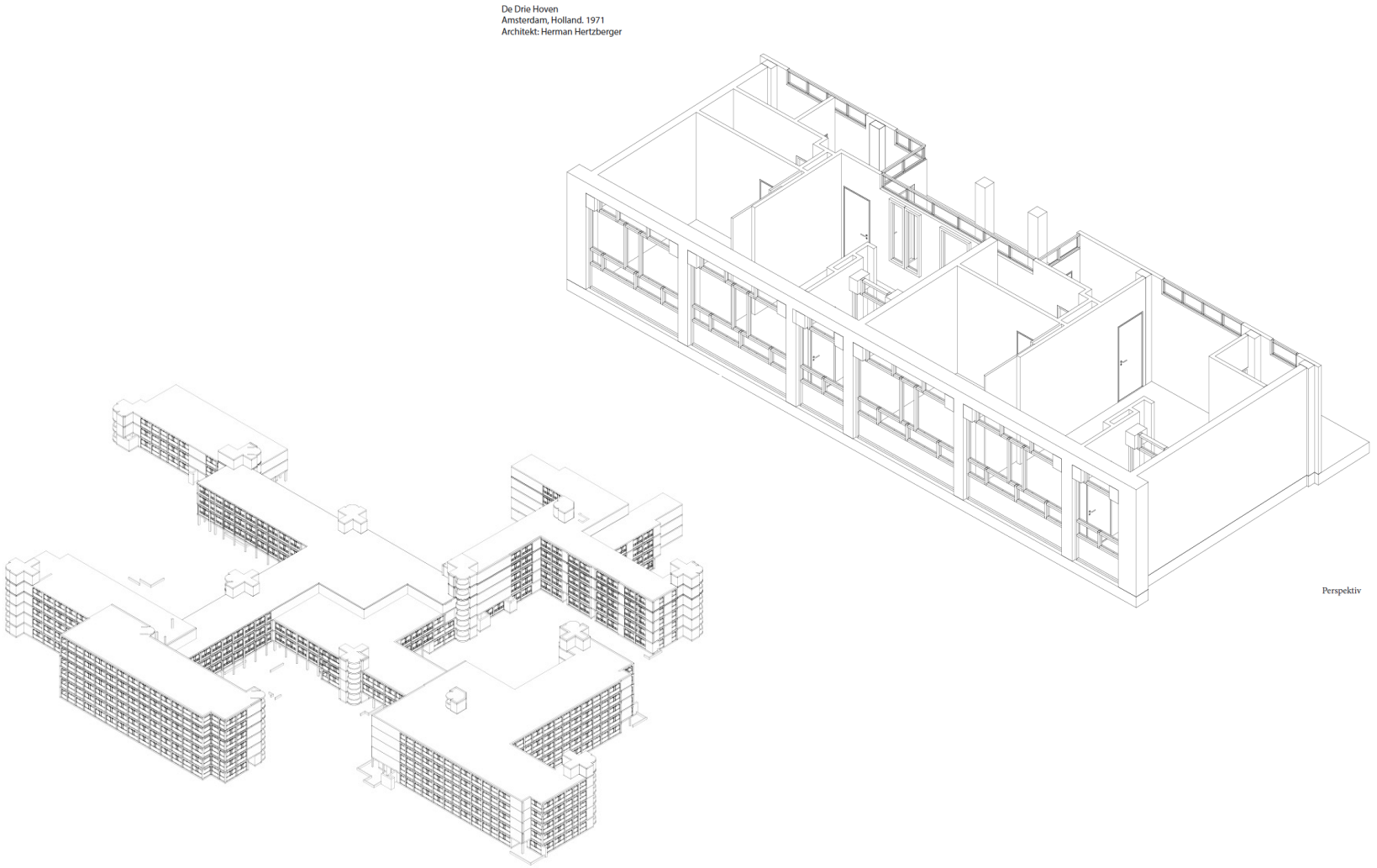


Maja Holm, Sofie Lundstrøm, Felix Knowlton, IBT, 2022

Revit for arkitektstuderende 2022

De Drie Hoven – Herman Hertzberger

KUB · U



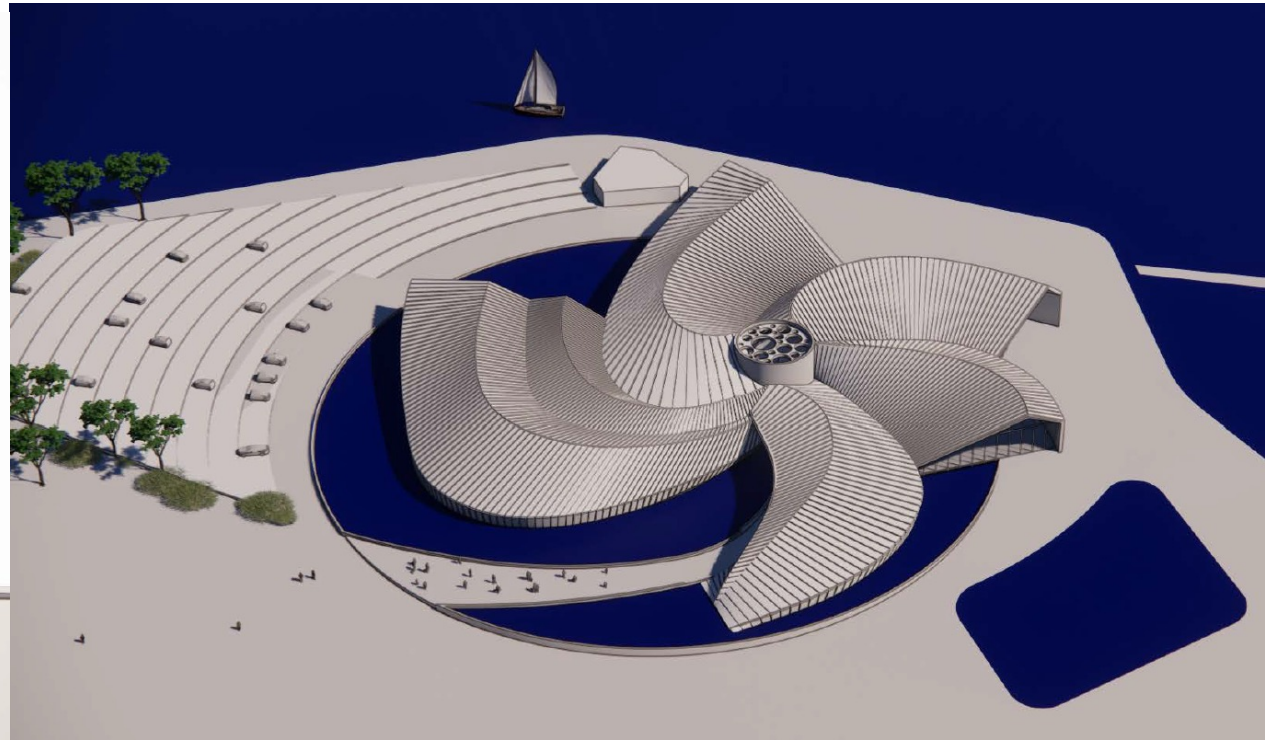
Mathilde von Schoubye, Irja og Amanda, IBT, 2022

Revit for arkitektstuderende næste år?

Conceptual Massing

KUB · U

Baori Water Well Tower, Revit af Samer Hanna, 2022

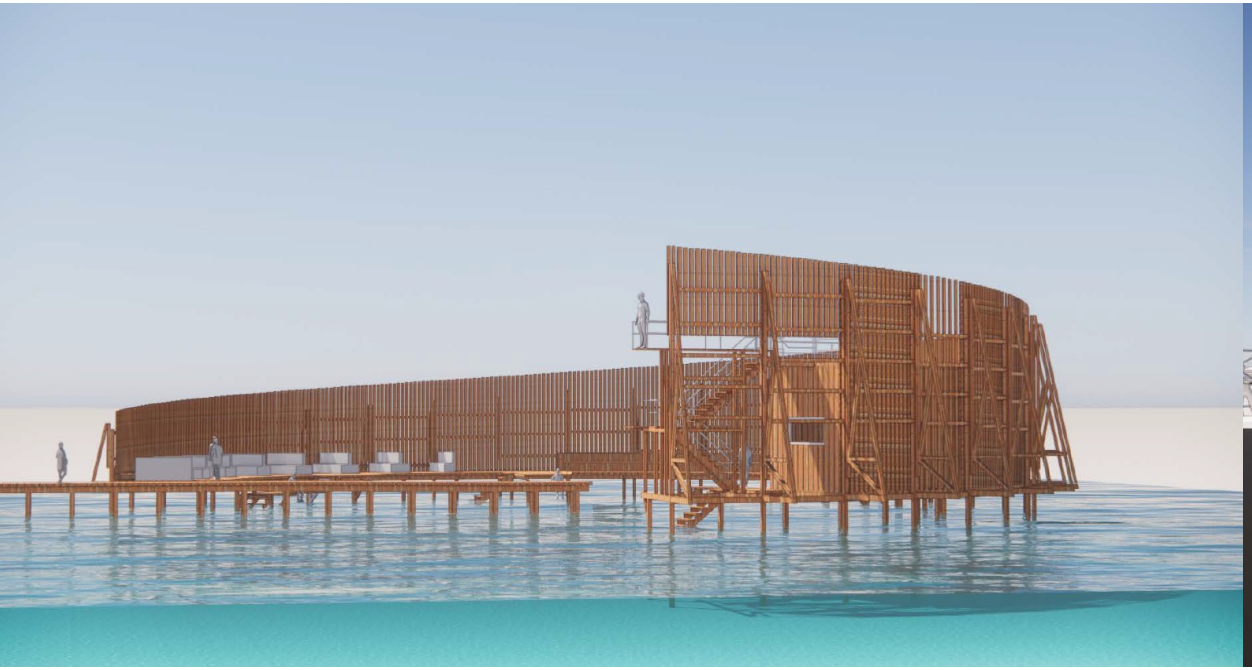


Den Blå Planet – 3XN, Revit af Samer Hanna, 2022

Revit for arkitektstuderende næste år?

Conceptual Massing

KUB · U



Badeanlæg Amager - White, Revit af Samer Hanna, 2022

Illulisat Center – Dorte Mandrup, Revit af Samer Hanna, 2022

Revit for arkitektstuderende næste år?

Conceptual Massing

KUB · U

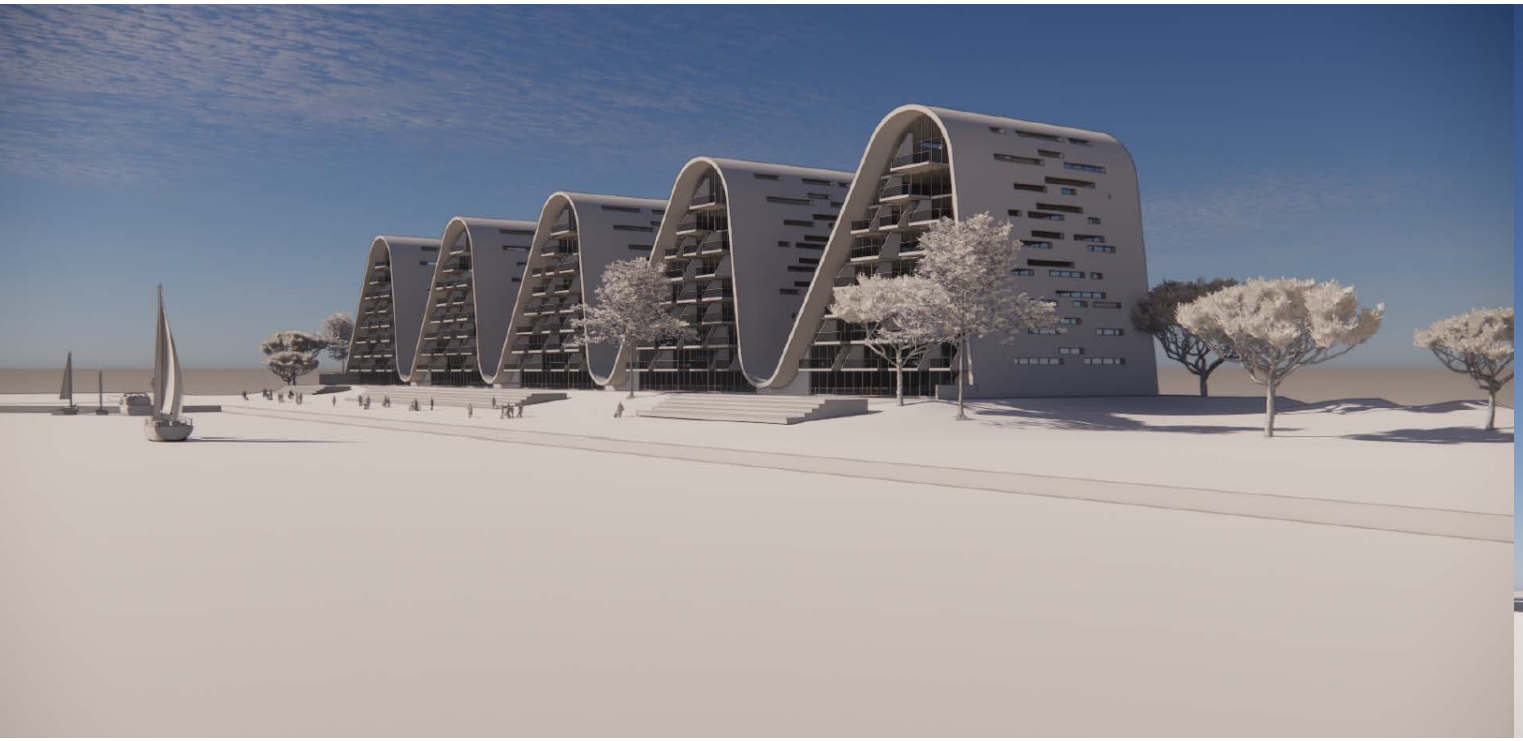
Fredericia Stream Line - KHR, Revit af Samer Hanna, 2022

Exhibition Center Prince Bay China, Revit af Samer Hanna, 2022

Revit for arkitektstuderende næste år?

Conceptual Massing

KUB · U



Bølgen Vejle - HLA, Revit af Samer Hanna, 2022

New York Tower - BIG, Revit af Samer Hanna, 2022

Revit for arkitektstuderende næste år?

Conceptual Massing

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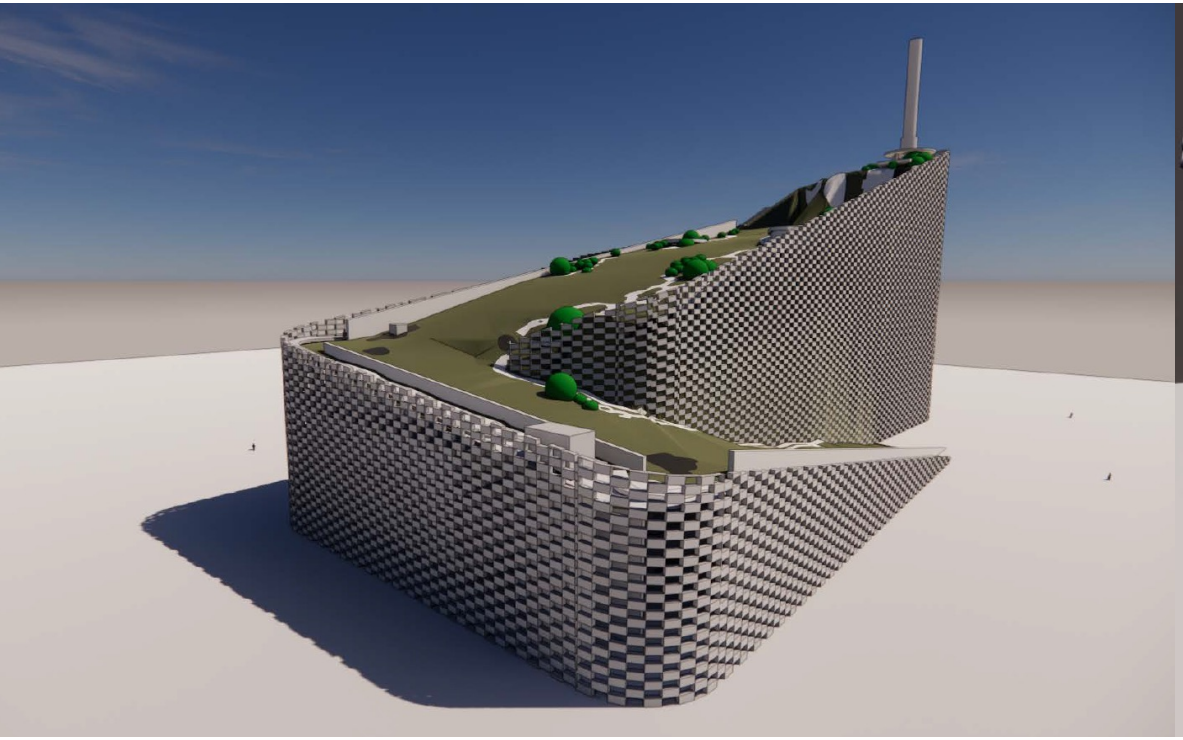

Bølgen Vejle - HLA, Revit af Samer Hanna, 2022

Korsbøl Flugten - BIG, Revit af Samer Hanna, 2022


SIGILLUM REGIÆ ACADEMIÆ PICTOR: SCULPTOR: ARCHITECTORUMQVE