

A stylized yellow graphic of a straw bale, shown in profile, occupies the left side of the slide.

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A series of seven yellow diagonal stripes, slanted upwards from left to right, are positioned below the event title.

CUT TECHNIQUE

advanced and modified

hybrid straw bale techniques

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STROHBAU

*CELLS
UNDER
TENSION



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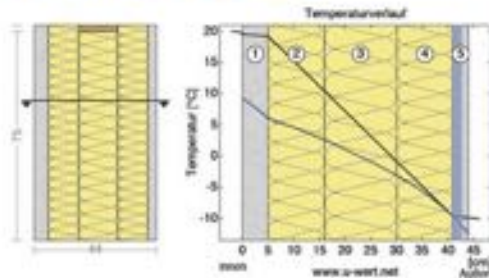
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architecture Architektur

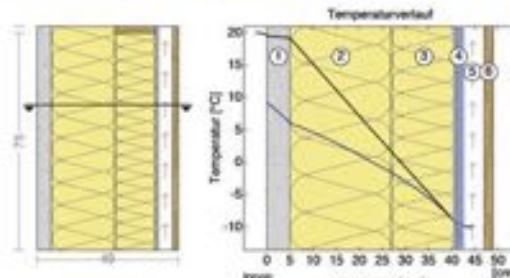
Budget, Needs, Safety | Budget, Ansprüche, Sicherheit

1/2) plastered on both sides beidseitig verputzt



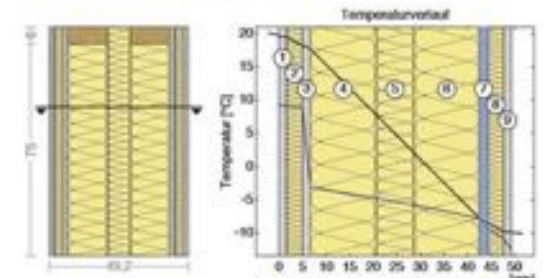
- Needs higher quality in airtightness and windproofness
- Structural bracing only through plaster
- No installation area (except plaster)
- Not perfect for Passive House Standard

3) plastered/planked on one side einseitig verputzt/verplankt



- Easier to achieve windproofness through second layer (board)
- Structural bracing through board or diagonal bracing
- installation area (if planked inside)
- Suitable for Passive House Standard

4) planked on both sides beidseitig verplankt



- Double safety through windproof and airtight second layer (board, membrane)
- installation area
- Passive House Standard

**How to choose
the right system?**
 Wie finde ich
das richtige System?



CUT
1 Post
inside (install.)
middle (no boards)
outside (facade)

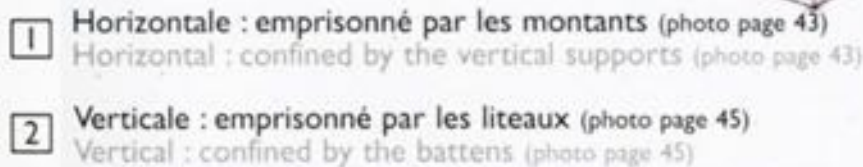
DOUBLEPOST
2 Posts
for planking
both sides

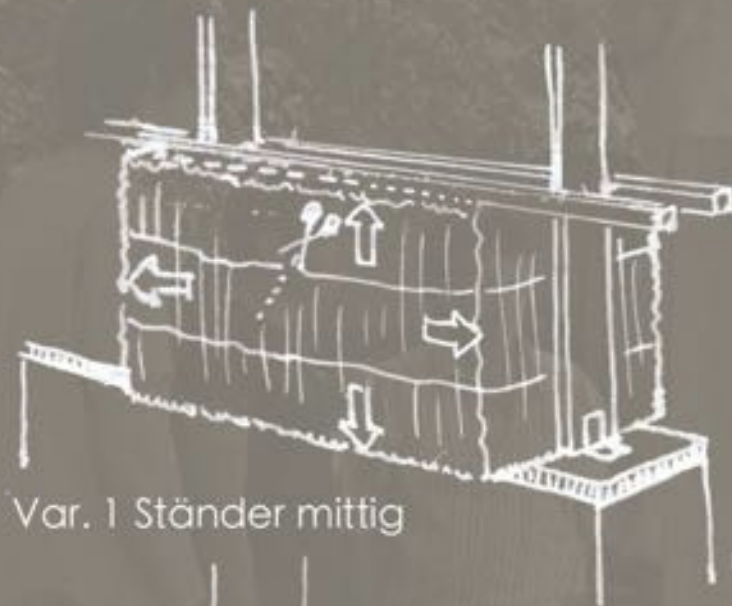


3 MAIN INFILL-METHODS

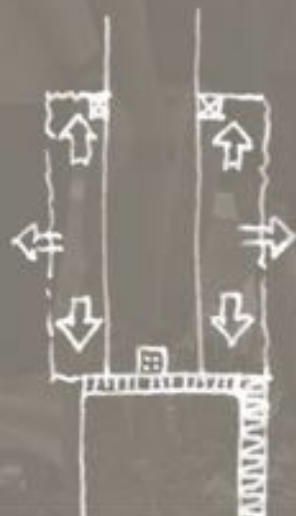


Direction of Tension*





Var. 1 Ständer mittig





2. Test (Laboratoire de l'IUT Génie Civil de Grenoble):

Bei diesem 2010 durchgeführten Belastungstest hielt die verbesserte CUT-Wand einem Druck von (mind.) 72 Tonnen stand (die Maschine war nicht für einen höheren Druck ausgelegt).

Quelle: www.habitatvegetal.com/fr/innovations/tests-en-labo

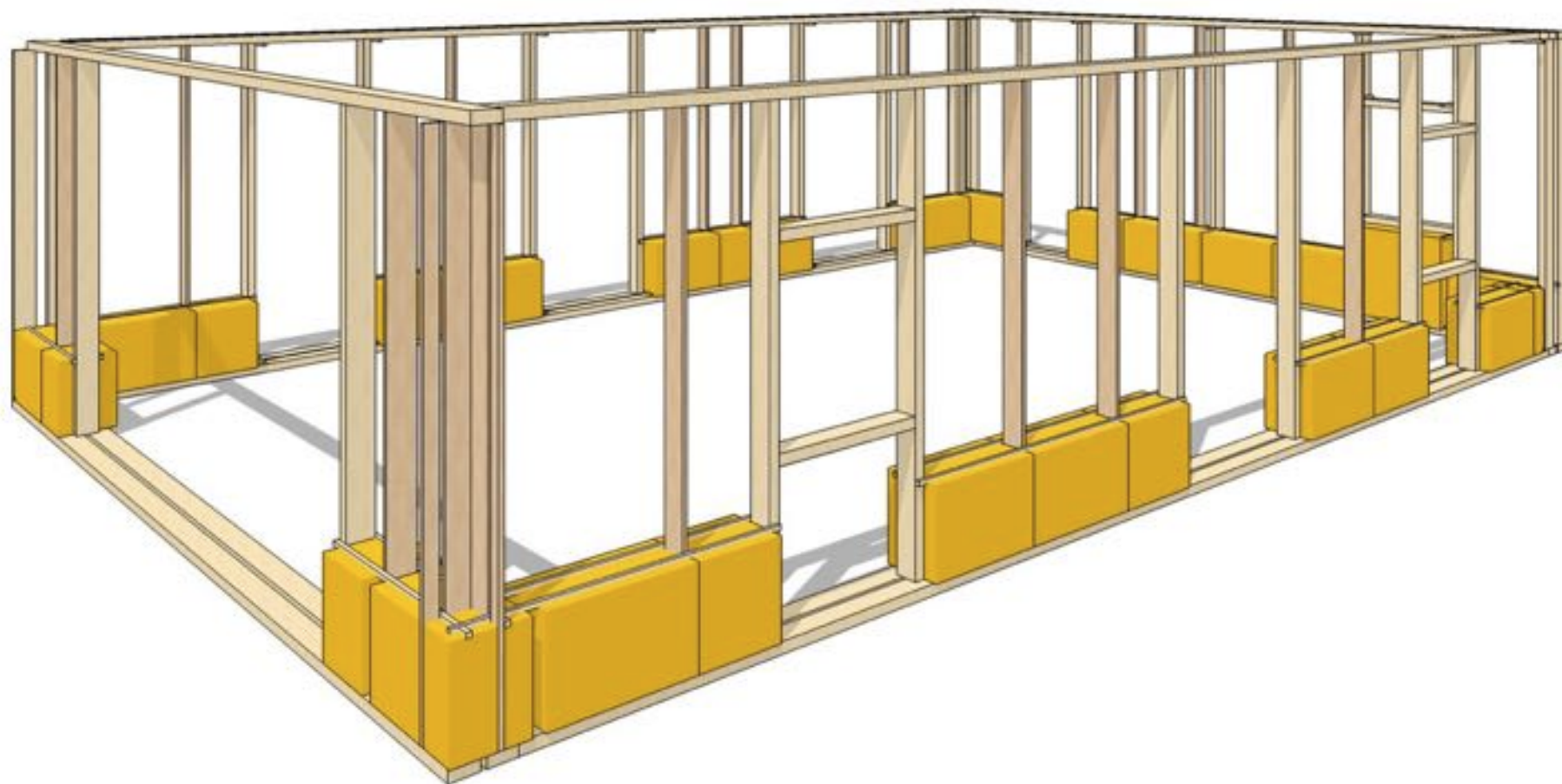
Contreventement du mur en paille et terre (en CST)



Charge verticale du mur en paille et terre (en CST)



72t Druck
vertikal



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Robbiton Childrens Playground Vienna



Robbiton Childrens Playground Vienna



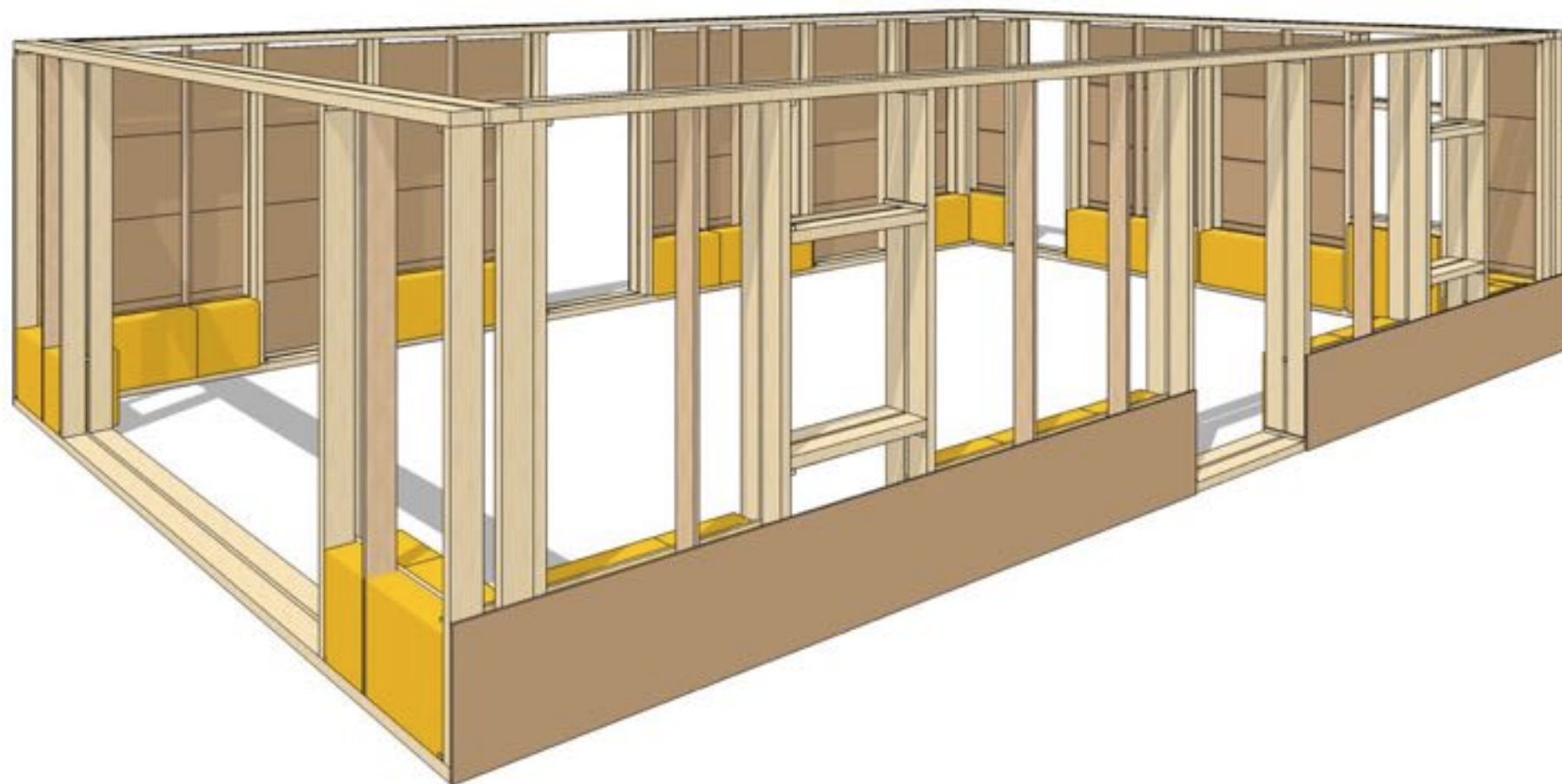
Robbiton Childrens Playground Vienna

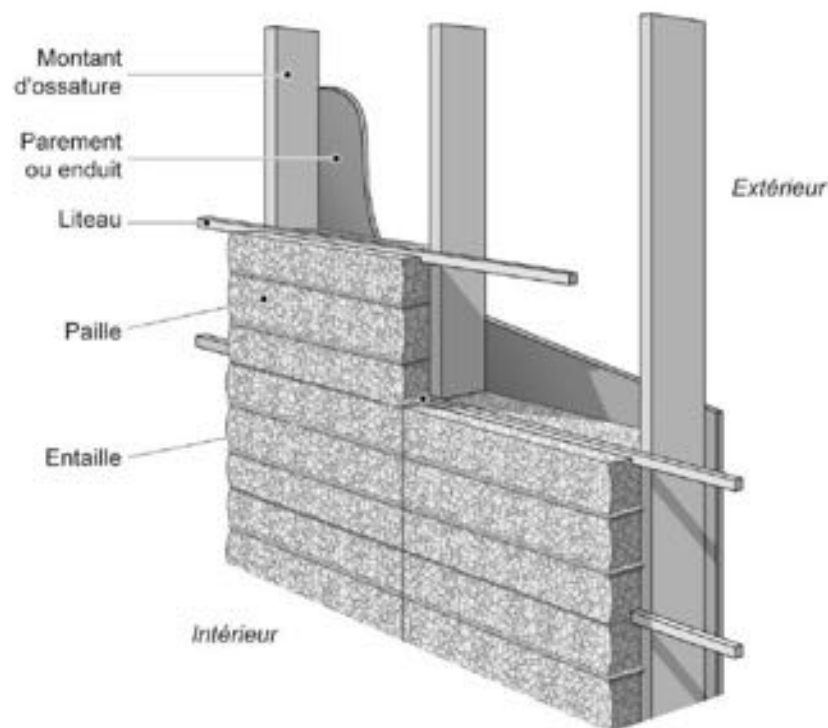
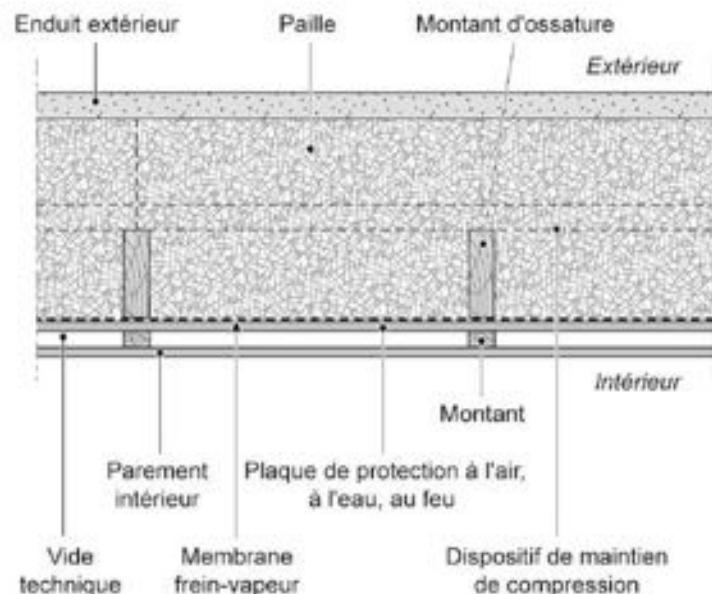


Robbiton Childrens Playground Vienna



Robbiton Childrens Playground Vienna





Commentaire : le maintien des bottes de paille peut être assuré par des liteaux enfoncés dans les bottes. Ces liteaux sont fixés aux montants d'ossature.



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Holzständerwand:

6 Doppelständer: 2mal 14 x 6 cm

(= 12 Ständer)

werden dazwischen
mit Stroh gedämmt

Höhe: 228 cm

(240 cm minus

Fuss+Kopf-
schwelle)

4 Fensterauf-
und Überlager:

2mal 14 x 6 cm

in der Länge der
Fensterbreite

+ 2 cm

(Dämmung)

Rauhschalungsbretter

unterschiedlicher Breite

für Diagonallattung

8 Kopfschwellen (Ringanker):

20 x 6 cm

ev. zusätzliches

Auflager für

Dachsparren:

10 x 10 cm

(liegt innen auf)

15 Rauhschalungsbretter

14 (12–14) x 2,5 cm

Länge 228 cm

8 Hauptständer: 20 x 6 cm

oder Rundholzständer ø 20 cm

Länge 228 cm

8 Fusschwellen: 36 x 4–6 cm

bzw. 2mal 18 x 4–6 cm

mindestens aber 20 x 4–6 cm (außen)



Ecotopia Tomelilla, Sweden



Ecotopia Tomelilla, Sweden



Ecotopia Tomelilla, Sweden



Ecotopia Tomelilla, Sweden

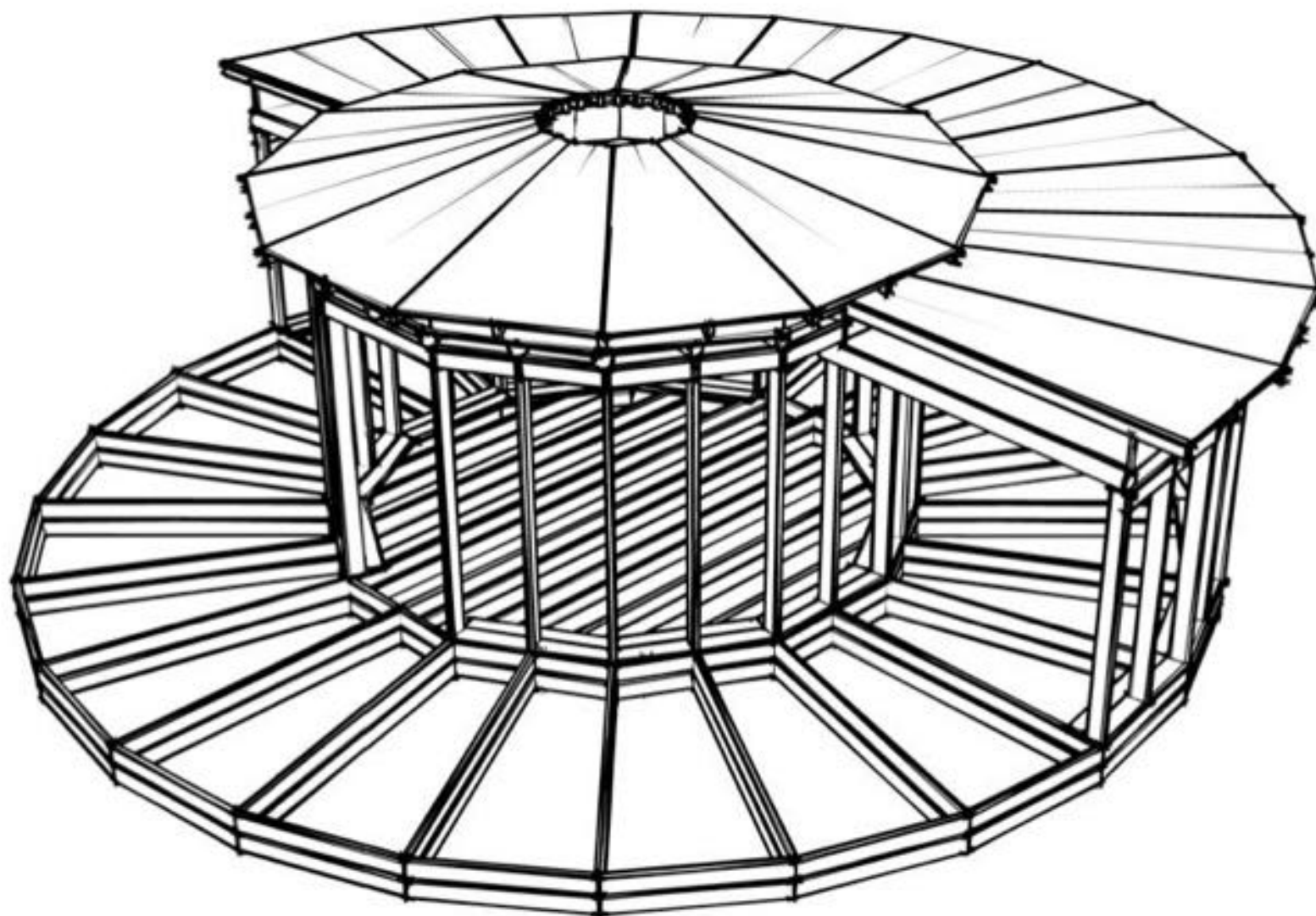


Ecotopia Tomelilla, Sweden





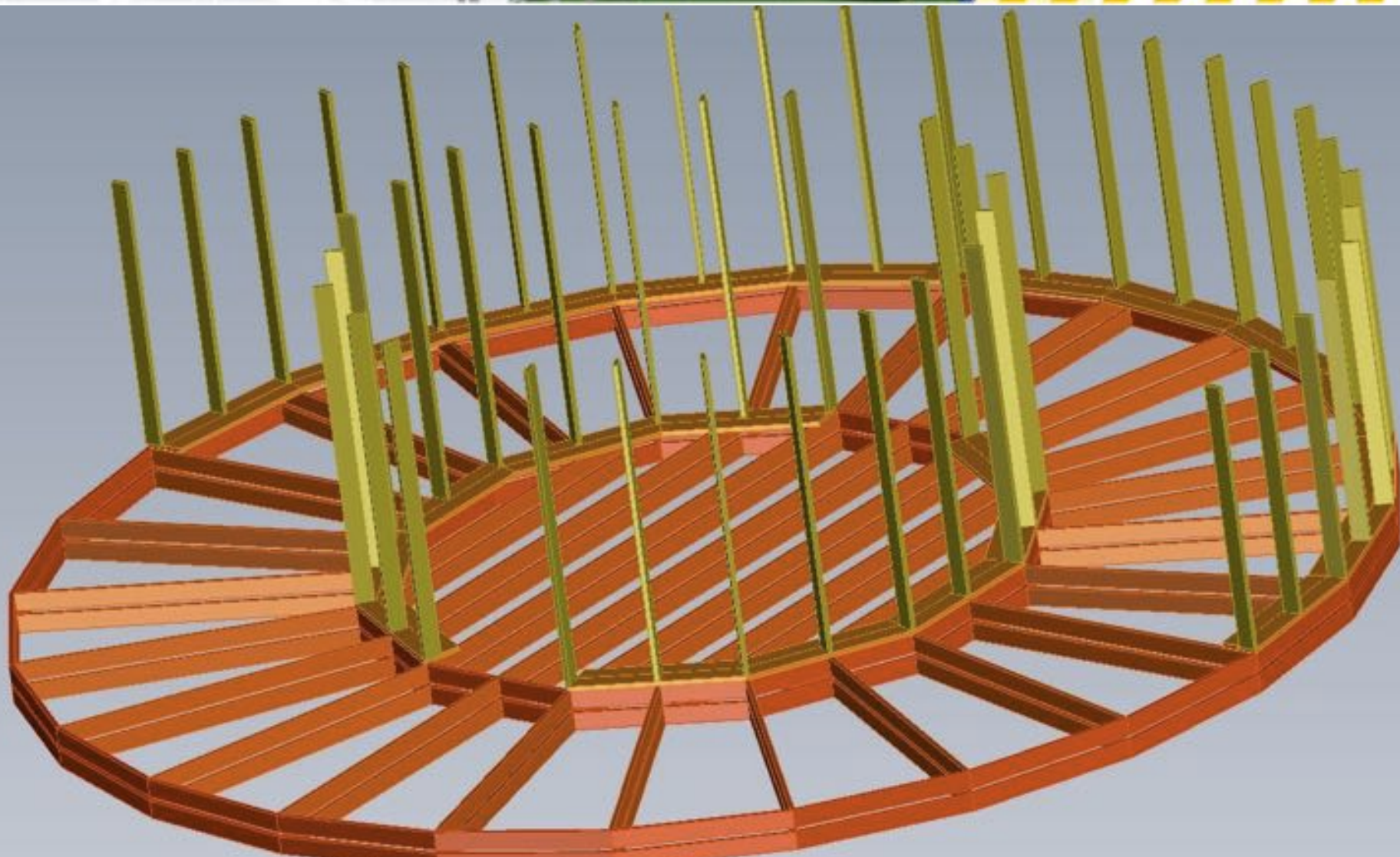
Ecotopia Tomelilla, Sweden

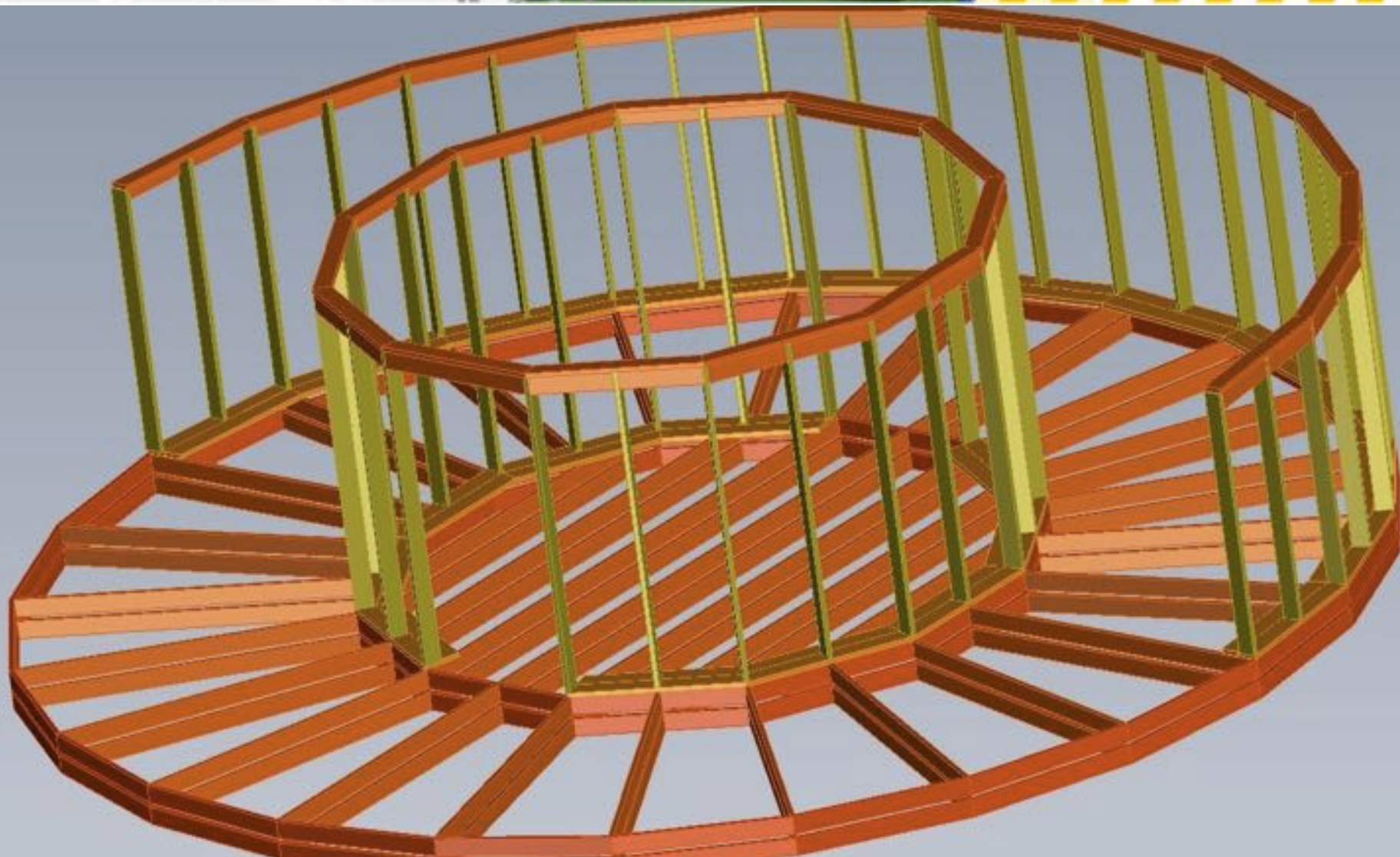


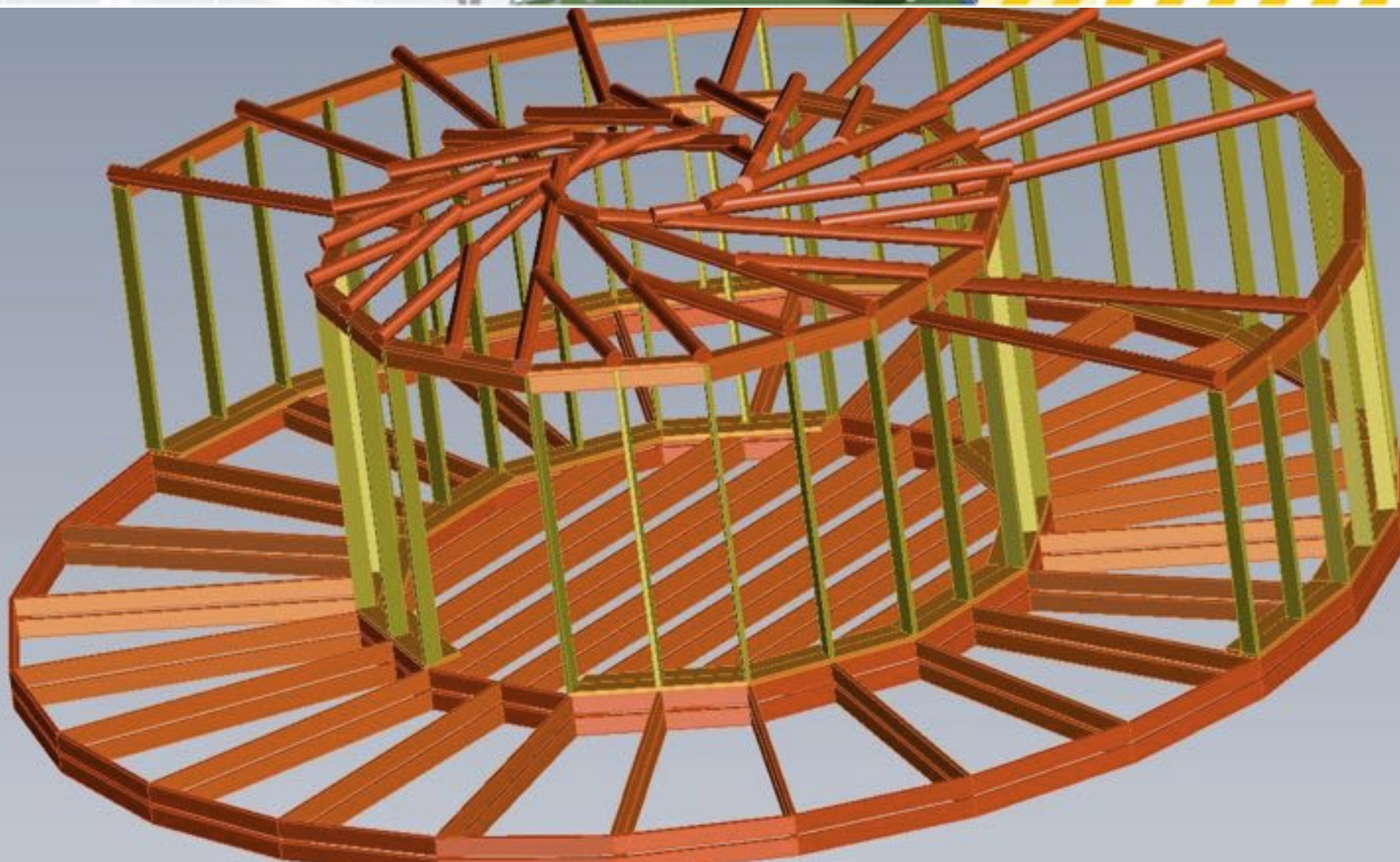


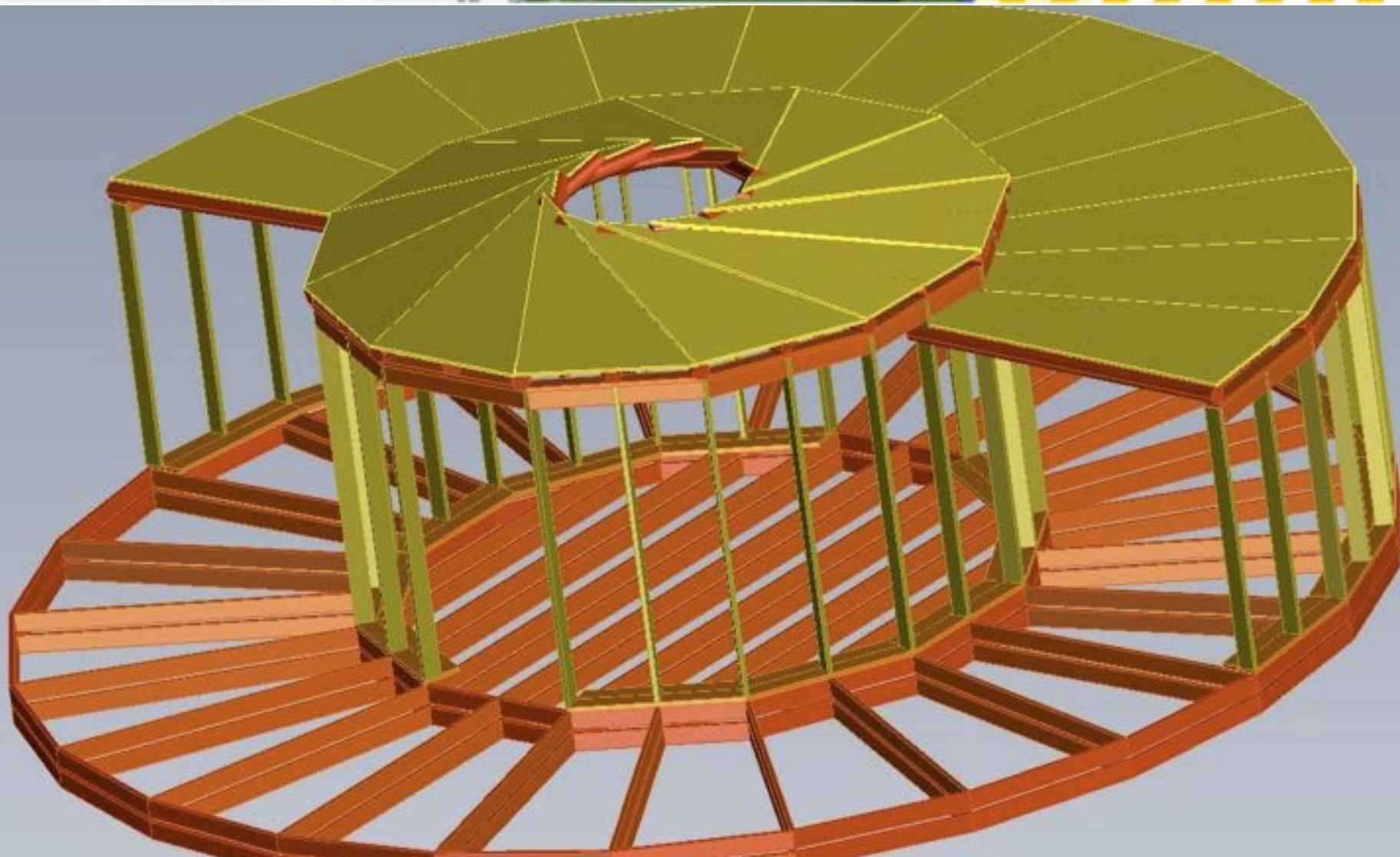
Low Cost & Low Tech Straw Bale House Upper Austria

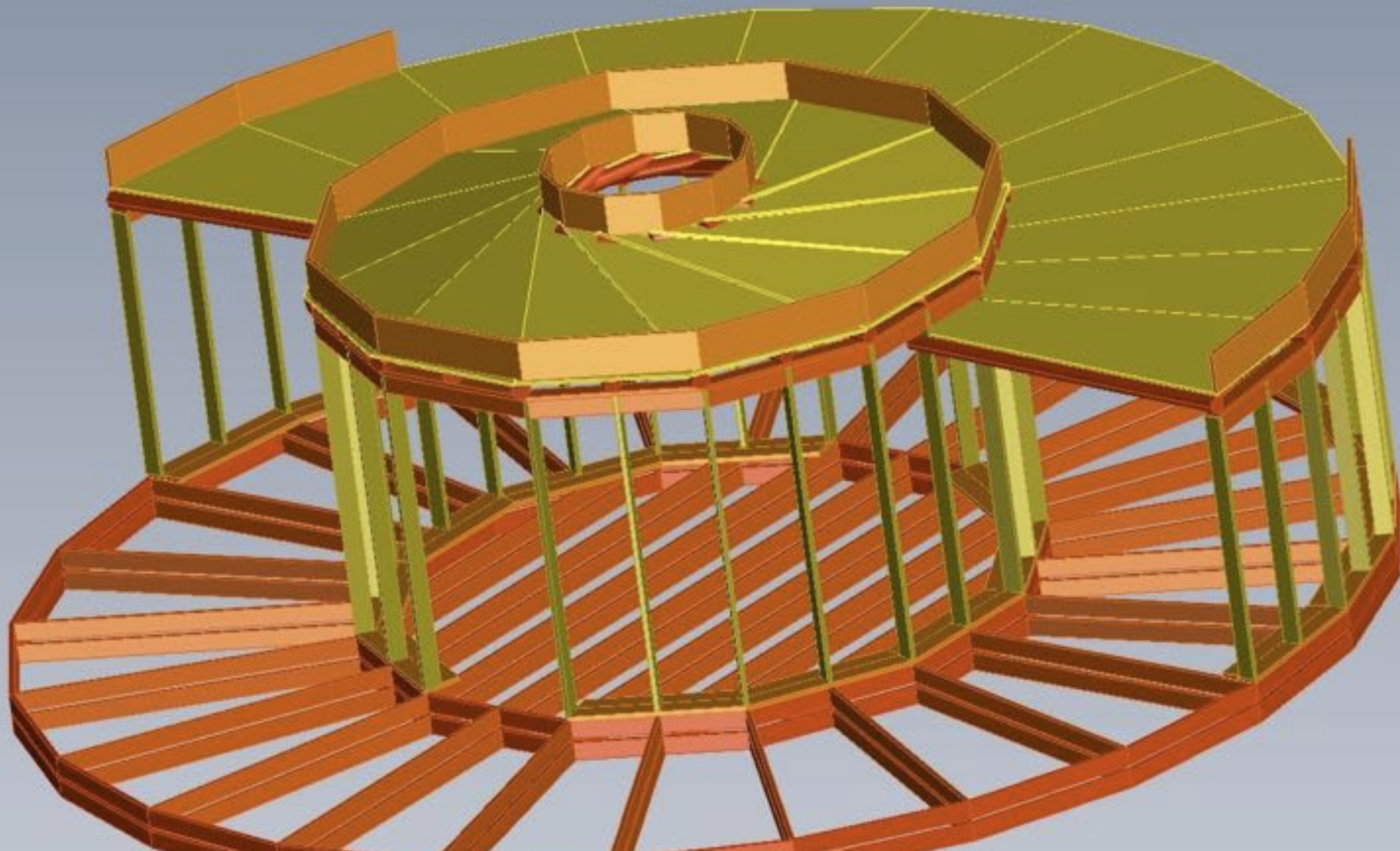


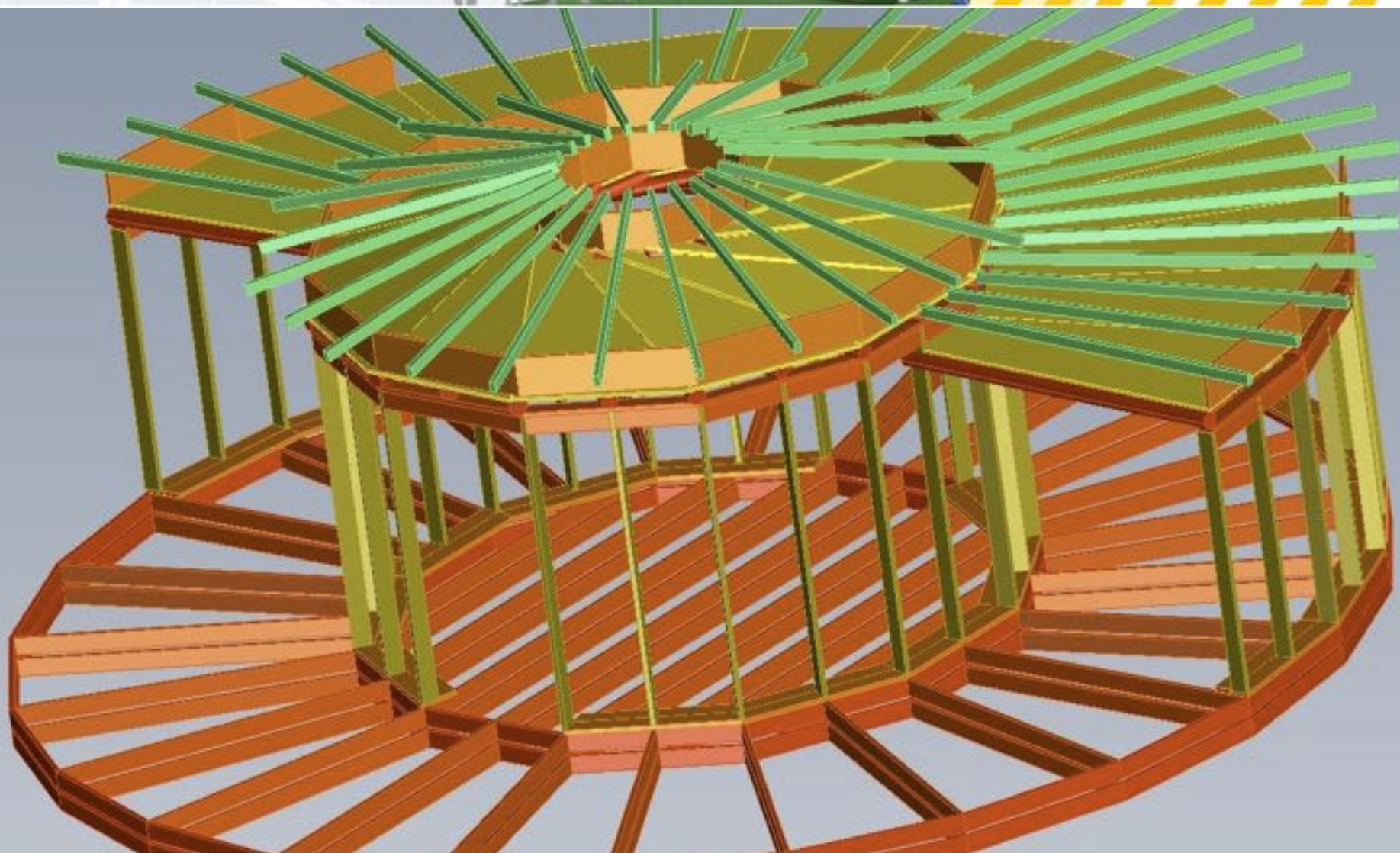


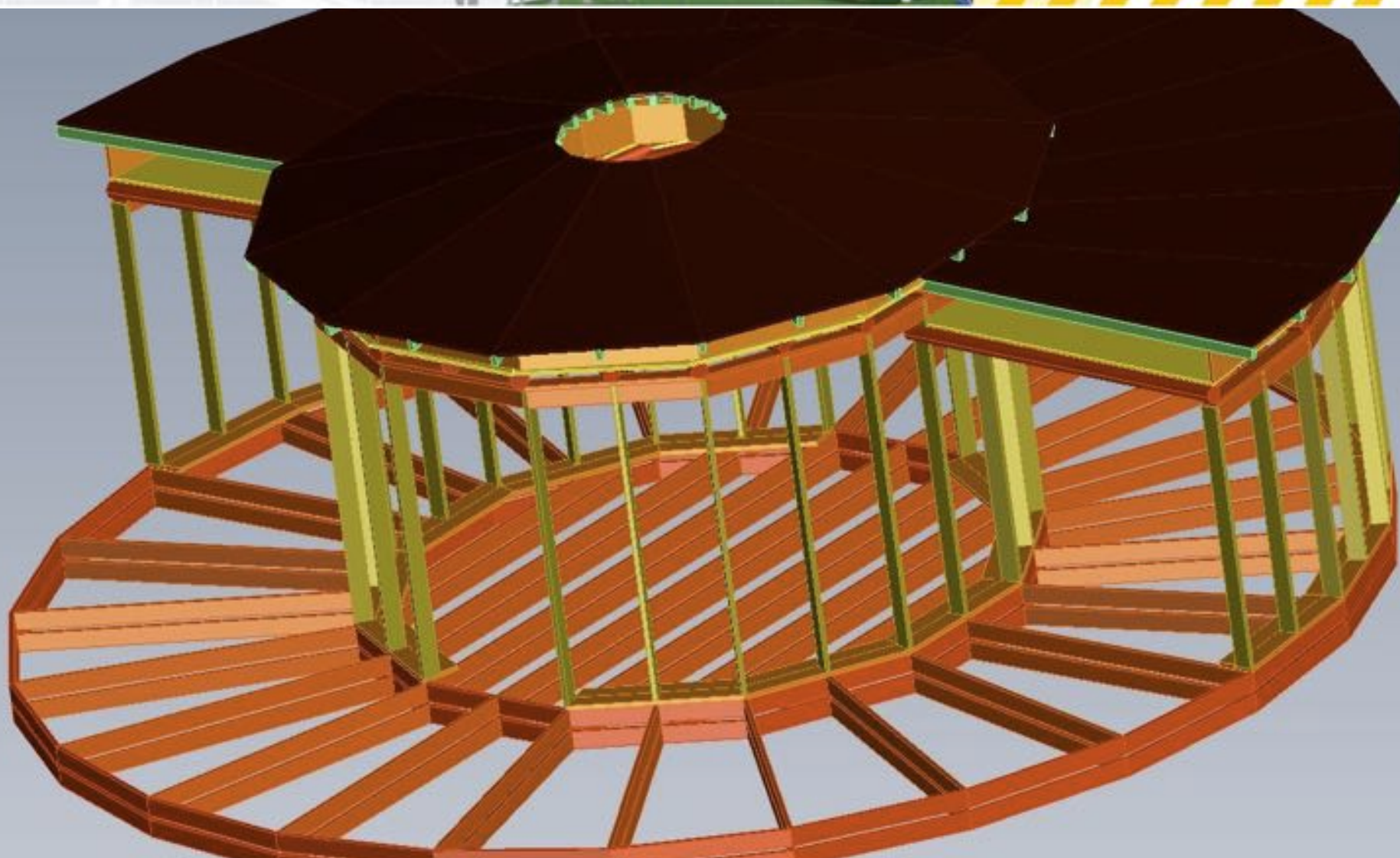














Low Cost & Low Tech Straw Bale House Upper Austria



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Low Cost & Low Tech Straw Bale House Upper Austria



CUT-house in Crete, inside diagonal bracing, Infill from outside



CUT-house in Crete, inside diagonal bracing, Infill from outside



CUT-house in Crete, inside diagonal bracing, Infill from outside



CUT-house in Crete, inside diagonal bracing, Infill from outside



CUT-house in Crete, inside diagonal bracing, Infill from outside



CUT-house in Crete, inside diagonal bracing, Infill from outside





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CUT-house in Crete, inside diagonal bracing, Infill from outside

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ORGANIC CUT

FREE
ORGANISCHE
FORMEN



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CUT-Straw Lion Ravelsbach, OrganiCut, Austria



CUT-Straw Lion Ravelsbach, OrganiCut, Austria



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CUT-Straw Lion Ravelsbach, OrganiCut, Austria



DACHBODENAUSBAU MIT STROHBALLENGEWÖLBE

halbovaltes Gewölbe

Gewicht der Gesamtkonstruktion

[ca. 29 m² Oberfläche auf 18 m² Grundfläche]:

1140 kg = 100 – 120 Strohballen

87 kg = Zementvorspritzer

145 kg = Stauss Fassadengewebe

725 kg = Lehmputz

2097 kg Gesamtgewicht (ca.)

= 110 kg/m² [233 kg/lfm Wand]

Maße des Gewölbes:

Höhe: 2,3 m innen OVAL

Breite: 4,0 m innen

Länge: 4,5 m

Gewölbeaufbau

von außen nach innen:

Unterdachplatte (Dachschrägel)

36 cm – 80 cm Strohballen

1,9 cm Dreischichtplatten-Streben

(Hilfskonstruktion alle 80 cm)

0,3 cm Zementvorspritzer

0,8 cm Stauss Fassadengewebe

2,5 cm Lehmputz

Altbestand
massiv

CUT-Vault, Virtual Building Site Ravelsbach, Austria



CUT-Vault, Virtual Building Site Ravelsbach, Austria



CUT-Vault, Virtual Building Site Ravelsbach, Austria



IMPRESSIONEN: CUT

CUT-Vault, Virtual Building Site Ravelsbach, Austria



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IMPRESSIONEN: CUT

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IMPRESSIONEN: CUT

CUT-Vault, Virtual Building Site Ravelsbach, Austria



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CUT-Vault, Virtual Building Site Ravelsbach, Austria



CUT-Vault, Virtual Building Site Ravelsbach, Austria



Virtual Building Site Ravelsbach: Energy Globe Winner « Earth » – Lower Austria 2015





CUT-Dome, Velden am Wörthersee, Carinthia, Austria



CUT-Dome, Velden am Wörthersee, Carinthia, Austria



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Quellenangaben Bilder:

Richard Lord (www.sealordphotography.net)





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CUT House in Veghel, NL by Michel Post (Arch.) | Tom Rijven (Workshop/Builder)

Photo: Wouter Klijn | www.strobouw.nl



CUT House in Veghel, NL, by Michel Post (Arch.) | Tom Riiven (Workshop/Builder)
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Thank you for watching

Herbert Gruber, asbn
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