dyoN53f8

Location: Guru Nanak Dev Thermal Plant,Bathinda,
Punjab, India

Easily spotted with the aerial view of the city, these bulky structures stand still and act in place of a landmark nonetheless serve no purpose and have been abandoned. These Cooling Towers may once have inspired the city towards creating up an efficient and cost-effective source of renewable energy but is discarded and no longer offer opportunity for the public as a whole.

The offerings for the future-

Being one of the major urban settlements of India, Bathinda offers home to over 1.3 million population with the density of 414 per kilometre square as of census 2011. Spatial management becomes an important role when the population is expected to rise in an area and therefore reinvigorating the existing structures rather than polluting the environment with excess construction and its mal effects; offers a sustainable approach towards creating home for the new generation sans exploiting the room of the old/nature.

The abandoned Cooling Towers offer a scope to serve as a residential unit for the community as the urban density seems to grow in the next years. With not much play of the ɥalready built upɔ, we propose to use Cross Laminated Timber (CLT) as a basic material for this proposed project where the manufacturing costs as well as construction waste produced in this industry is not only minimised but a more effective but also sustainable as it is composed of wood, a renewable resource (usually from reforestation),plus doesn't require the burning of fossil fuels during its production.

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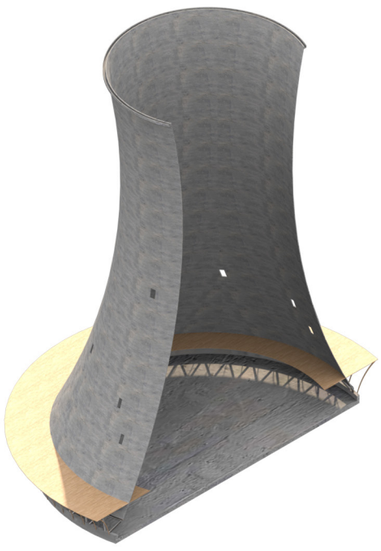
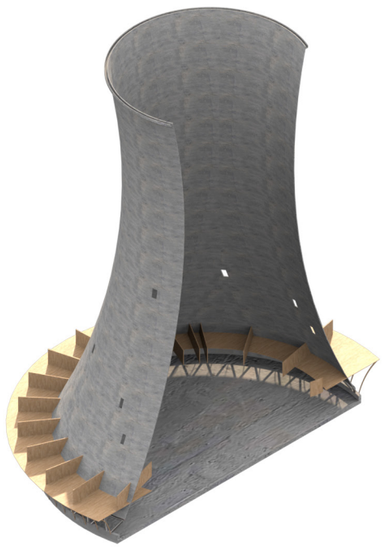
STAGE 1

initial cooling tower...



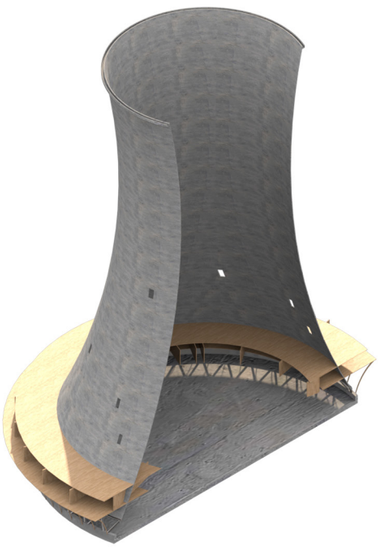
STAGE 2

adding 1st floor...



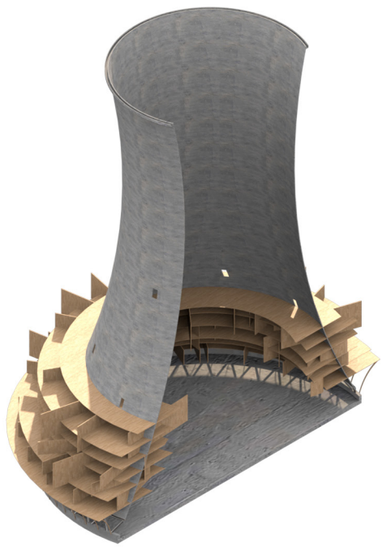
STAGE 3

load bearing walls...



STAGE 4

2nd floor above walls...



STAGE 5

continuing this process...

fig. 1

fig. 2

fig. 3

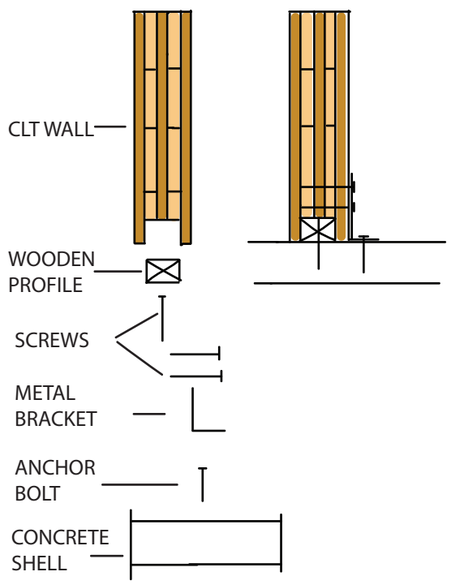
fig. 4

The initial idea or concept was driven by the web-like structure of a birdʯs nest where minute particles (including the waste and recycled material found) come along and is weaved along the path (here, Cooling Towers) offering a greater strength and a sense of weaved organic form going along with the already built-form and accompanying the fluidity of the lake aside.

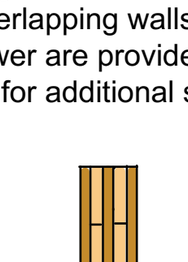
The free-flowing design of birdʯs nest with not much sense of geometry but creating an organic, natural form tries to obey the forces of nature instead of imposing non-native material to the project.

The form of the floor forms circular concentric rings. These rings offer a harmonious flow inside the tower obeying the forces of nature is hence provided with overlapping walls at different angles and levels to ensure the stability of the form in addition to creating interactive spaces in between which would enhance the character of the space (being inspired by the Mohallla concept of Indian architecture).

The structure is meant to be load bearing as the floors are supported by the overlapping walls and joints inside the tower are provided with steel plates for additional support.

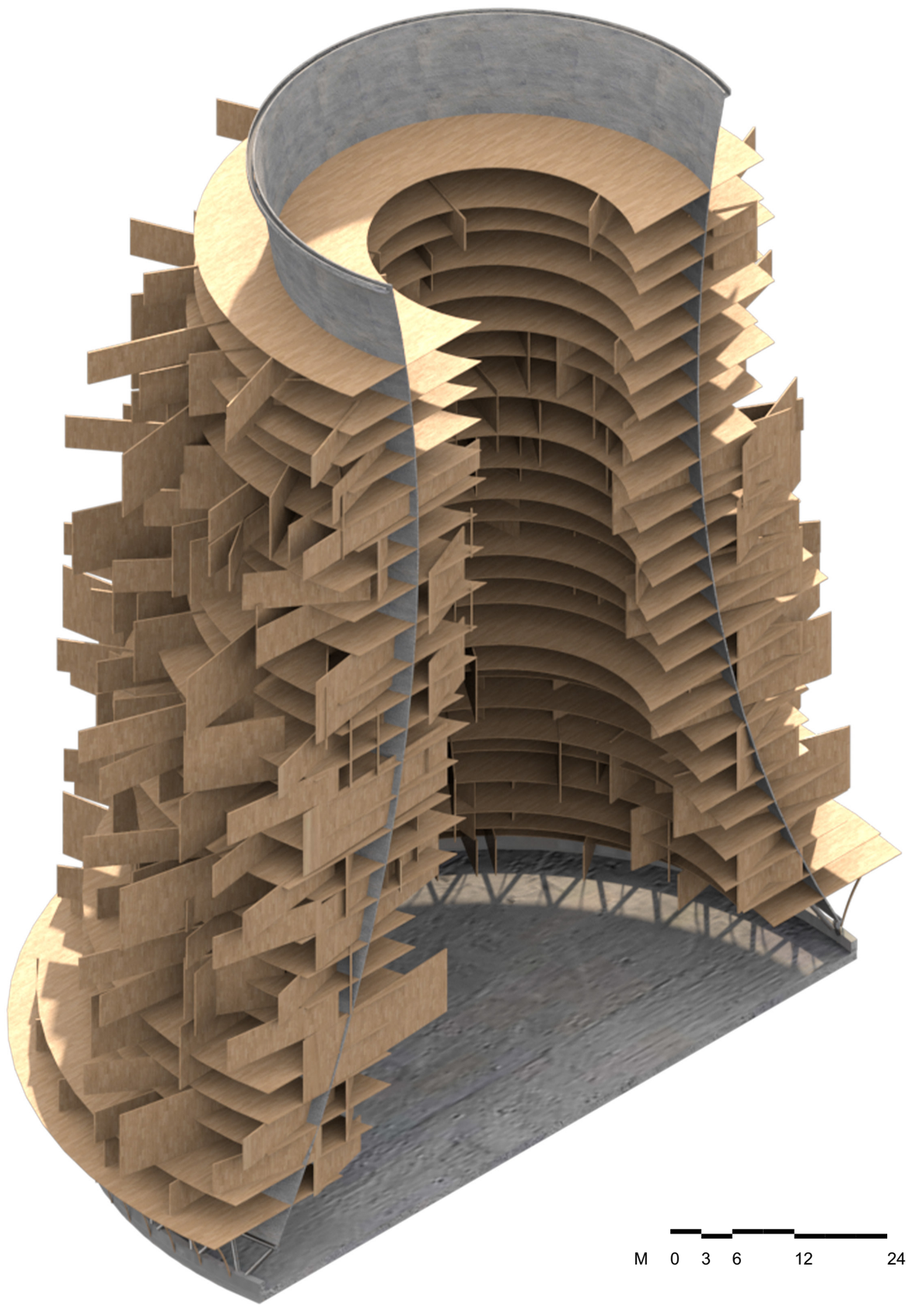


CONNECTION OF WALL TO RCC TOWER



FLOOR TO RCC TOWER USING BRACKET

FLOOR TO WALL USING SCREWS AND BRACKETS



AXONOMETRIC SECTION

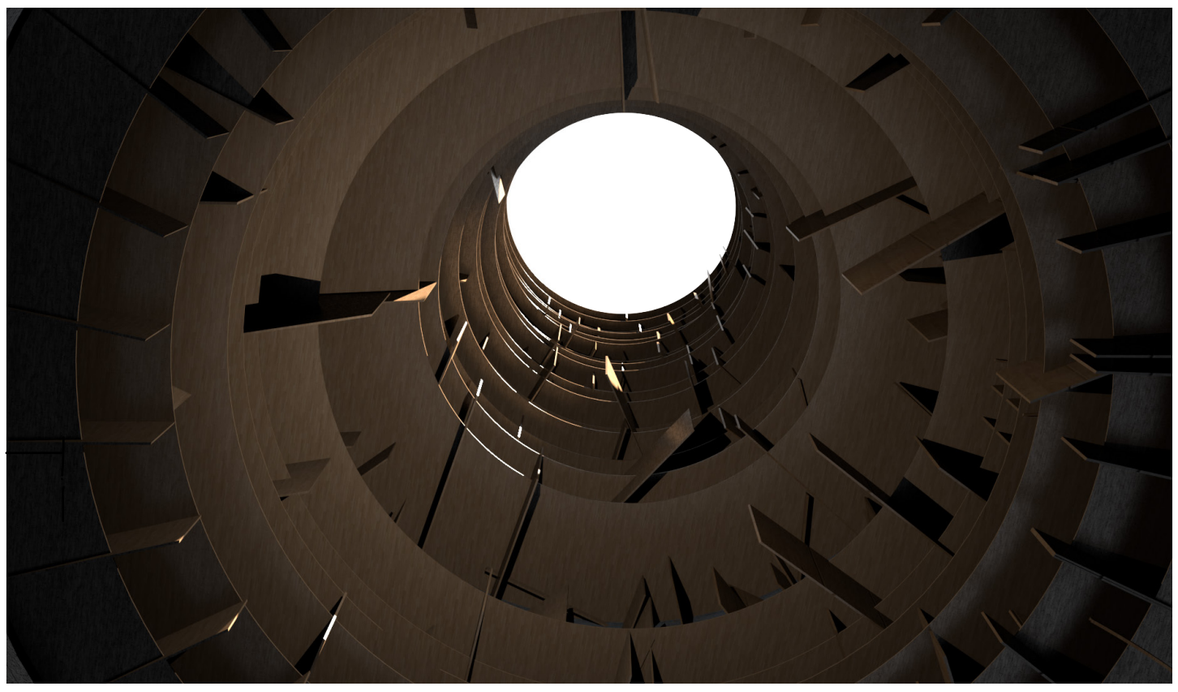


fig. 5