

## **The Smallest Grain**

Archery Hall  
FT Architects

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Material Design | Prof. Joris Fach

Seen from the outside, the first impression of the building is not impactful. Covered by dark-coloured timber makes the building itself looks serene. Minimal openings toward the outside make people guess, as it is unusual for a building that looks like a small house. The pitched roof is something you expected from a building made in Japan. However, it is a different story what is inside of it.

Inside of it, there is a big open space, big enough for a boxing ring. In this case, it is for an archery hall. On the south side, no columns are interrupting the long span of an opening towards the target practice. If we see above our head, there is another wonder of the building. A criss-cross of trusses makes one big connected roof. Although it looks full fragile, it is a strong monolith structure.

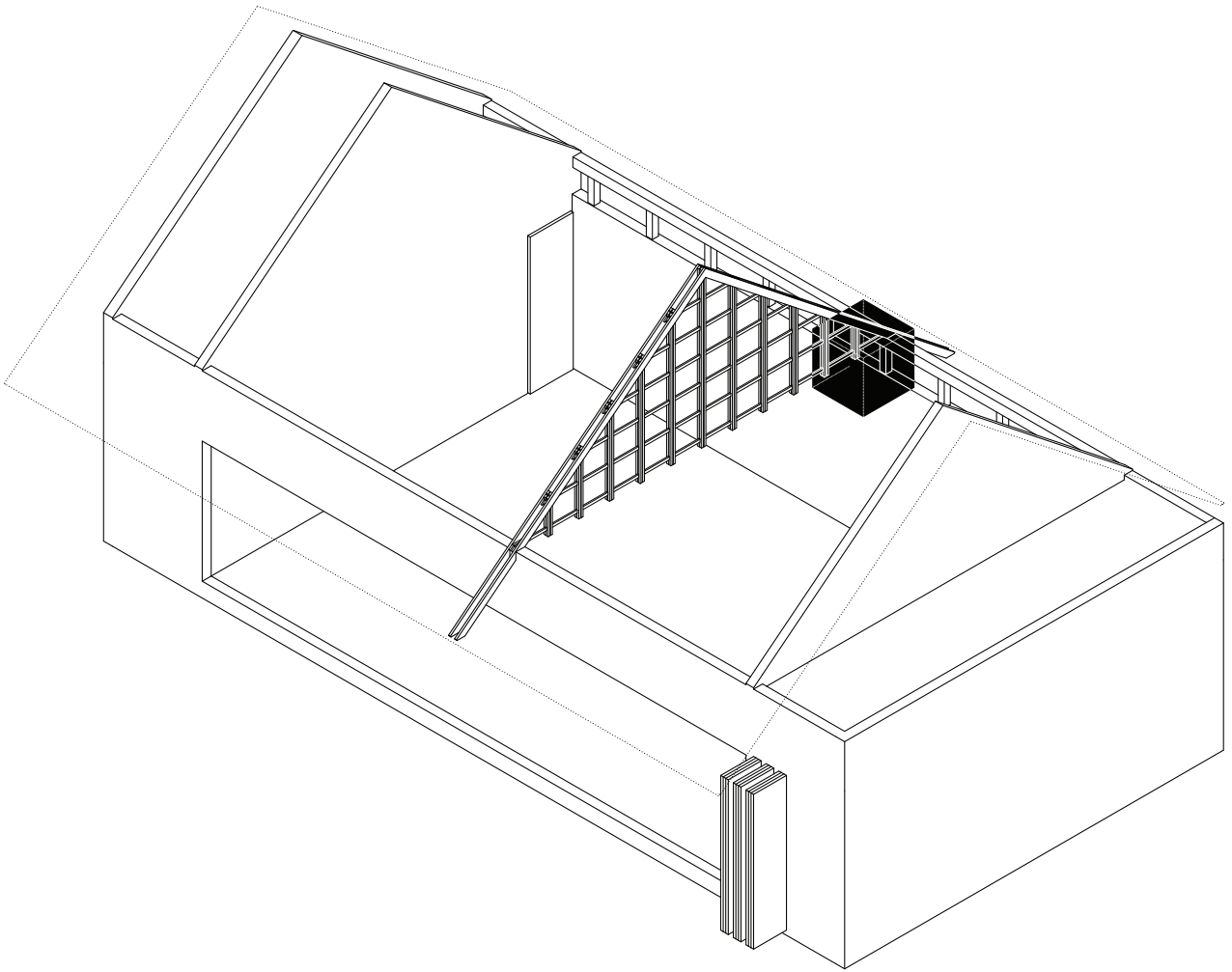
The lattice structures are made from Cyprus that usually for furniture, not a house roof structure. For pull elements in the truss, a single piece of timber is used, just like a cable tension. This treatment is repeated at every small distance in one truss. Not only that, but between one truss to others this method also applied to connect and brace them. As for the push elements, it is tricked by using several timber pieces, making a collective piece of timber work into one function.

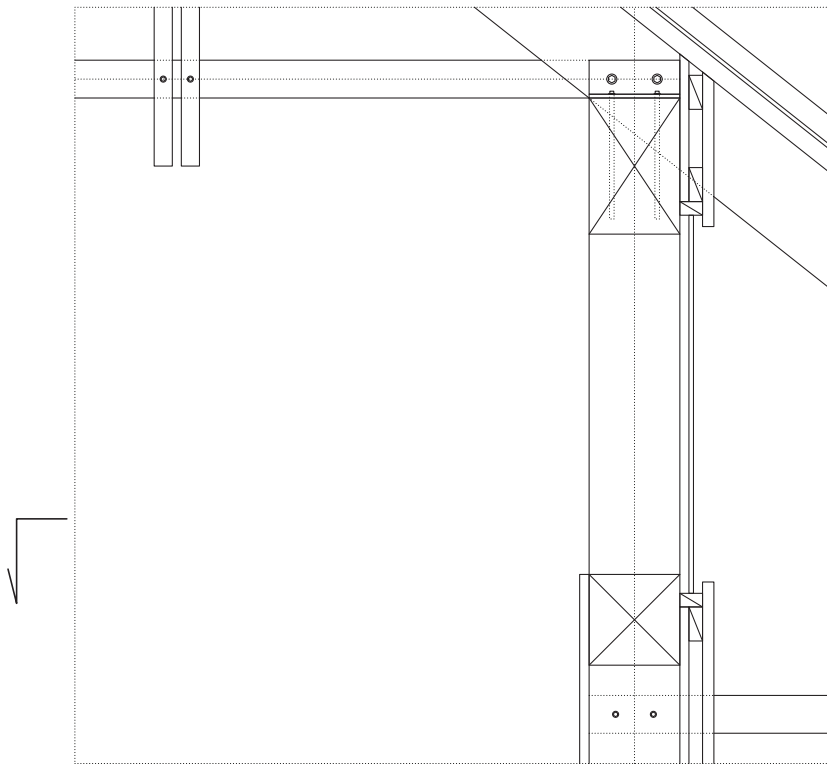
By using small dimensions timber for the roof structure, it gives a sense that parts of the structure can

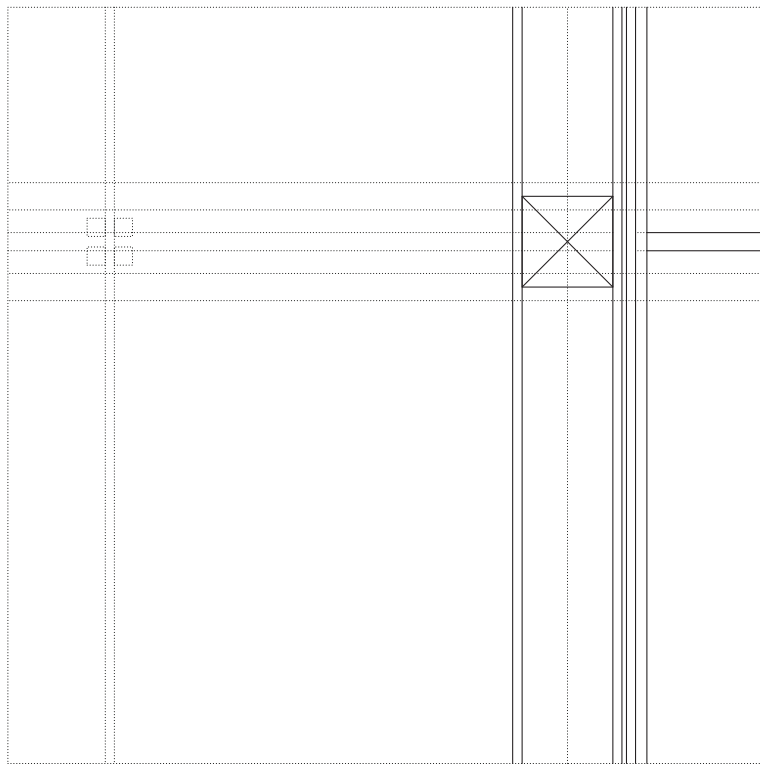
be replaced or repaired without disturbing other parts. Another brilliant idea from this method is there will be no shortage of material as it is using material that is widely used and fast to be grown. The application of this way can be replicated on a bigger or smaller scale.

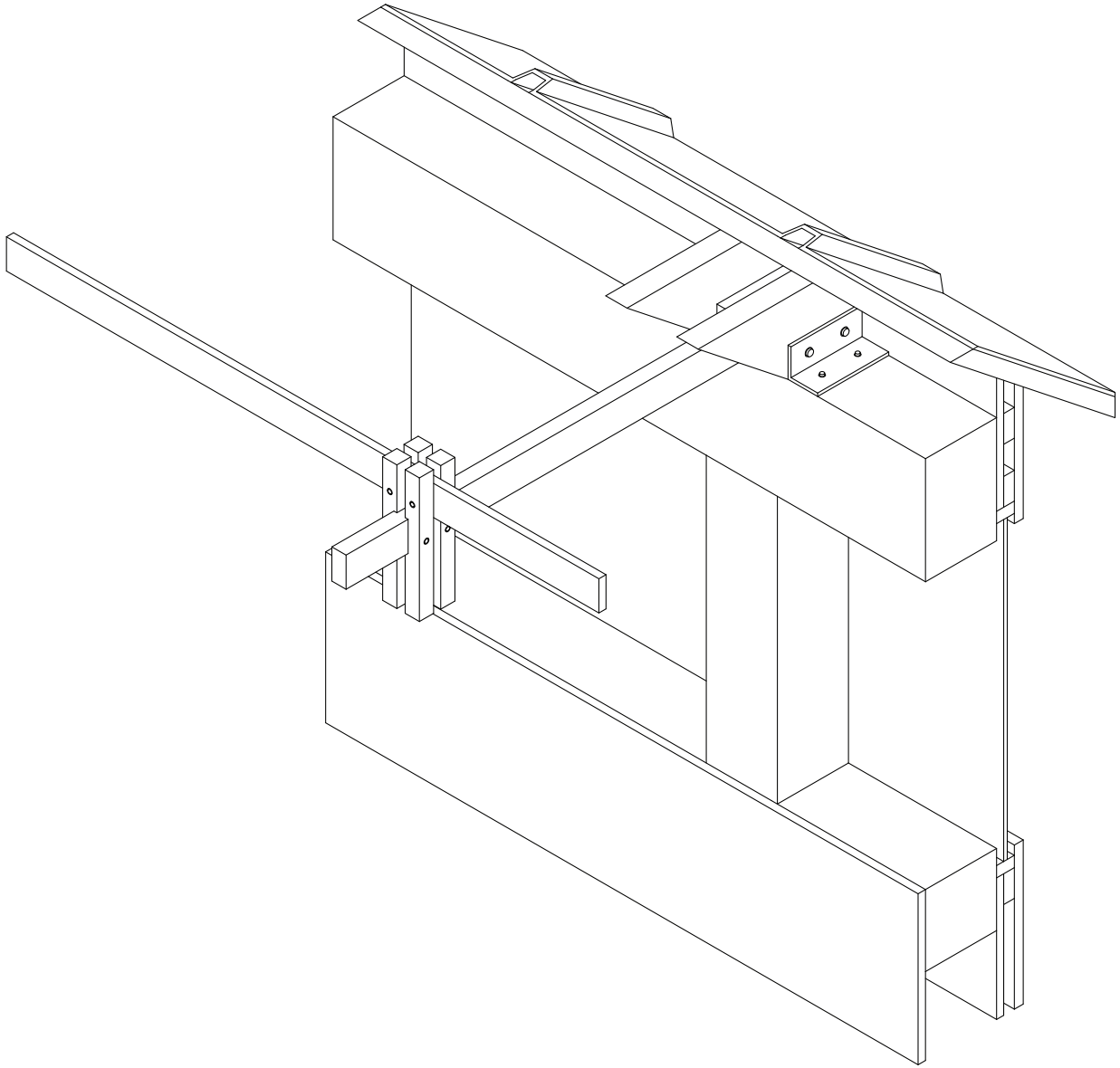
The room looks clean with only using three colours adaptation. White, black and natural wood colours. At a glance, the colour choice is adapting the traditional Japanese archery clothes. The joineries of structural members also look neat and strengthen this aspect. Big bolts and steel plates are used in the higher position from the ground so it is not visible from human eye level. Even if there are parts that use other material, not within the three colours, it will be covered by timber. Furthermore, small screws in the visible parts are within the timber itself, not protruding outside. It is exposed but at the same time enhances the clean look of the structure.

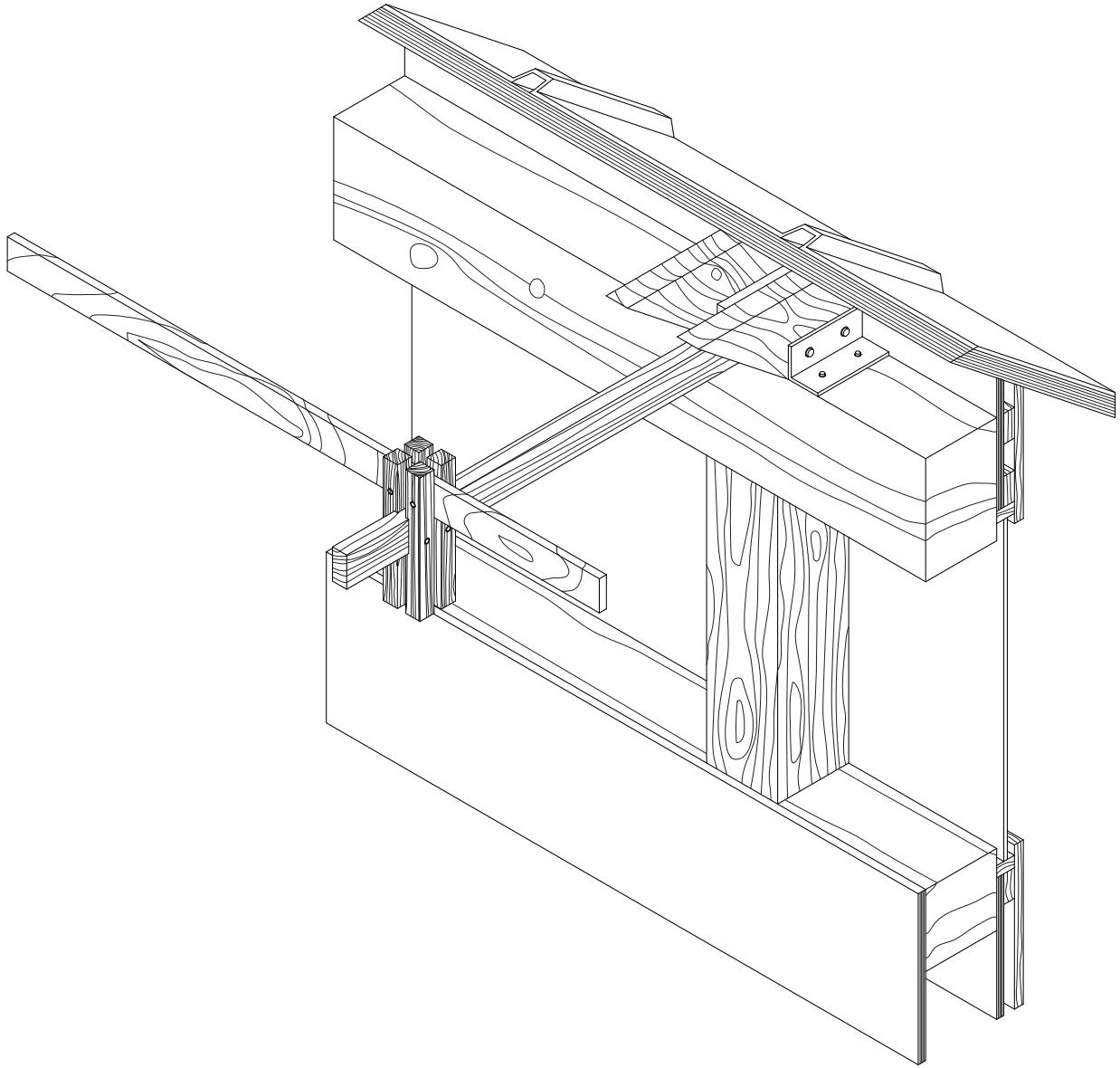
From the structural ingenuity, colours choice, intimate scale to clean joineries, the building speaks louder and stronger than we expect in the beginning. We expect a normal building with a normal look from it. It speaks louder and stronger but not to disturb but enhance the experience. This archery hall is a hidden gem for everybody.

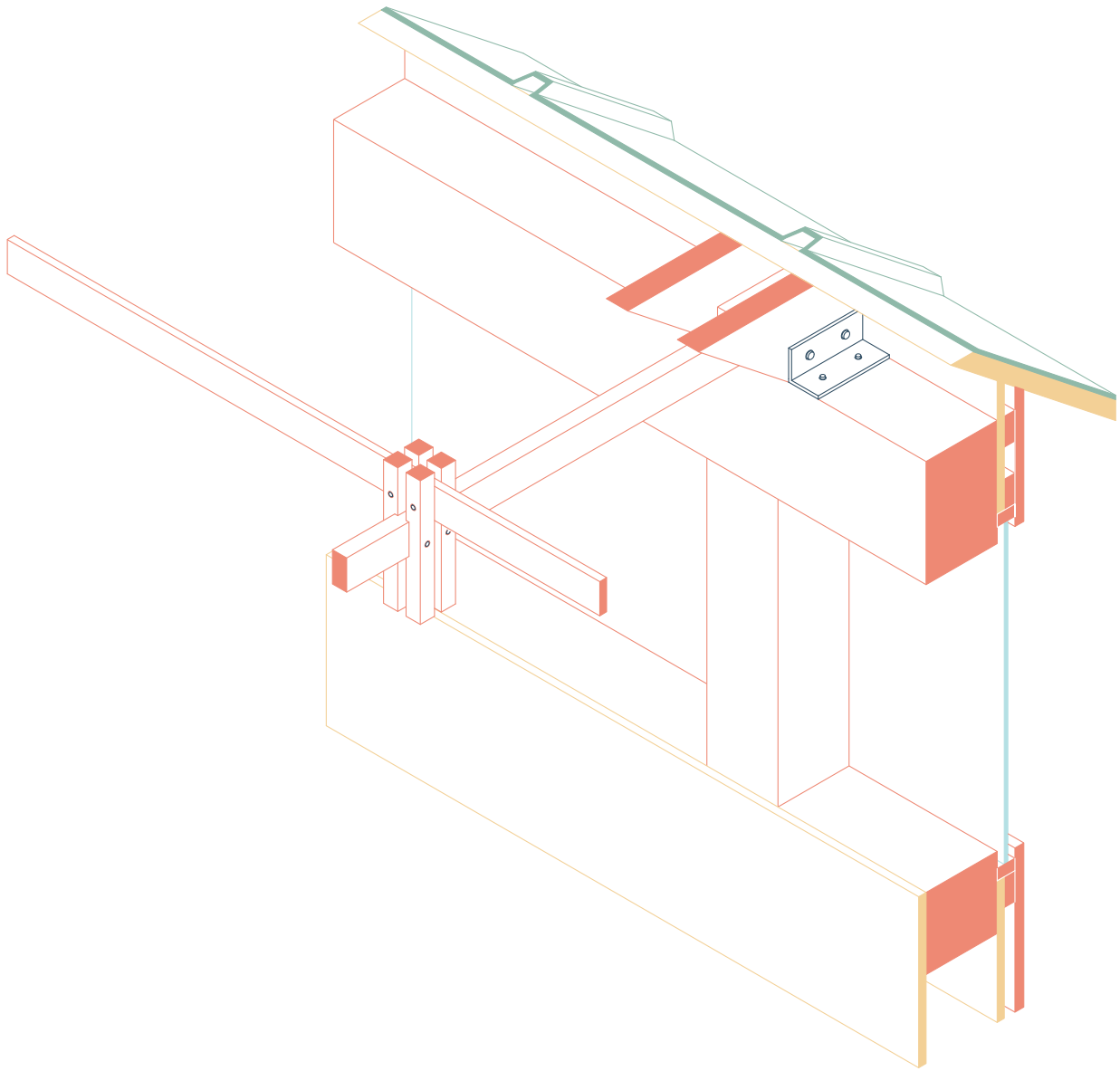












- Timber
- Plywood
- Glass
- Aluminium
- Steel



