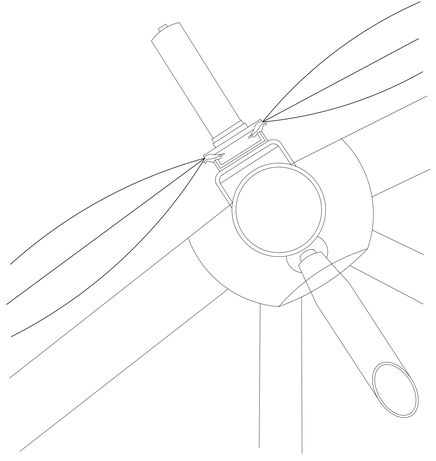
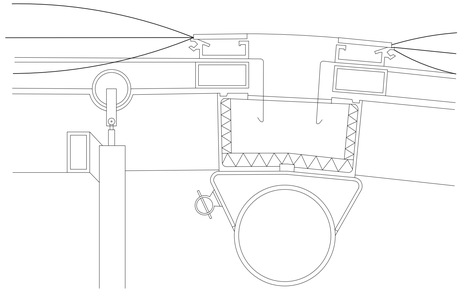
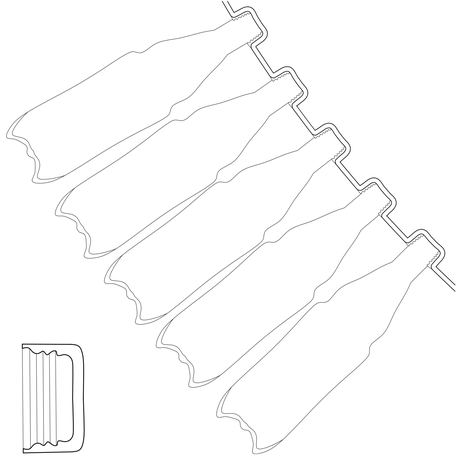


Each dome has what's known as a hex-tri-hex space frame with two layers. The outer layer is made of hexagons (the largest is 11 metres across), plus the odd pentagon. The inner layer comprises hexagons and triangles bolted together. The steel-work weighs only slightly more than the air contained by the Biomes. The structures are more likely to blow away than down, so are tied into the foundations with ground anchors, a bit like tent pegs.



The transparent 'windows' in each hexagon and pentagon are made of ethylene tetrafluoroethylene copolymer (ETFE), or 'cling film with attitude', as we like to call it. Each window has three layers of this incredible stuff, inflated to create a two-metre-deep pillow. Although our ETFE windows are very light (less than 1% of the equivalent area of glass) they are strong enough to take the weight of a car. What's more, ETFE can transmit UV light, and is non-stick, self-cleaning and lasts for over 25 years. The structure is made of double-curved glulam (glued laminated) timber beams (the timber is endorsed by the Swiss Forestry Stewardship Council).

Elsewhere in the Core, you'll find recycled wood, plant-based floorings (Marmoleum from flax, carpets from maize), and concrete from china-clay sand (low carbon footprint). The little green tiles are made from recycled Heineken bottles.



For my facade proposal I intend to use the bottle-cap fixture and focus on the material of plastic, using the vacformer and other instruments to make my facade perform as a unit with interchangeable qualities.

This is an example of where bottles have been attached to an interior structural membrane with inset caps to achieve a performative material particularly in the sense of thermal and visual properties. I will focus my investigation on thermal and interchangeable qualities over time.