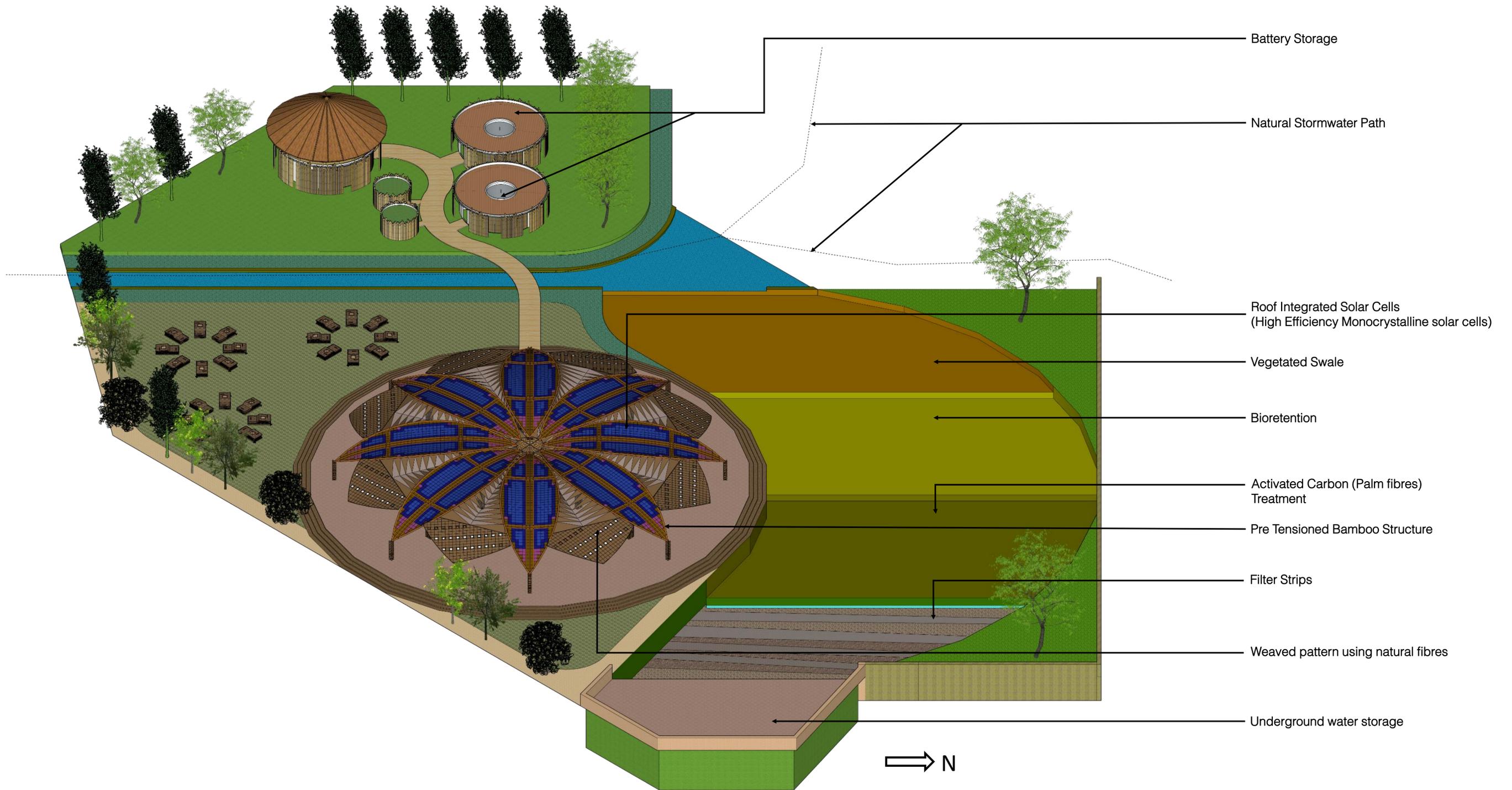


Regenerative Systems: Water, Energy & Structure in Harmony

"Through seamless integration of water, energy, and structure, A Celestial Weave embodies resilience—where architecture breathes with nature."



Stormwater Filtration & Collection

"A Celestial Weave utilizes graded filtration layers to capture and purify stormwater, ensuring sustainable water management within the site."

Collection Channels – Direct rainwater from key surfaces into filtration pathways.

Multi-Stage Filtration – Gravel, sand, and activated carbon layers remove impurities before storage.

Reservoir Integration – Holds 500,000 liters annually for irrigation, cooling, and community use.

Overflow Management – Directs excess water into a natural retention basin, preventing flooding.

Solar Energy System

"Harnessing abundant solar energy, the structure remains fully self-sufficient, generating enough power to sustain lighting, cooling, and essential operations."

Integrated Photovoltaic Panels – Each petal features 39 sqm of solar panels, maximizing efficiency.

Total Solar Panel Coverage – 312 sqm spread across eight petals.

Energy Output Potential – At 20% efficiency, the system generates 100 MWh annually, ensuring sustainable operation.

Passive Solar Strategies – Optimized shading and ventilation enhance thermal comfort.

Structural System & Material Integration

"Inspired by traditional weaving techniques, the framework balances cultural heritage with high-performance architecture."

Pre-Tensioned Bamboo Framing – Each petal is an independent, self-sustaining structural unit, allowing efficient assembly by local skilled artisans.

Weaving Techniques – Spaces between petals are enclosed using a flexible weave of palm fronds, coconut fibers, and other locally sourced materials, ensuring adaptability and resilience.

Load Distribution – Modular support elements optimize structural integrity while reducing embodied carbon.

Sustainability Factor – Biodegradable and locally regenerative materials enhance long-term resilience.