Inspired by Nature

We have been inspired by how nature gathers sunlight through layers of forest canopies to implement photo-voltaic technology in an innovative, three-dimensional array. Layers of transparent, photovoltaic foliage filter energy and provide lush, dappled shade for activity and events.

Energy Story

- The St Kilda Halo has been designed to enhance the cultural heritage of the site. The design maximises the opportunity for human interaction with the structure and encourages people to learn about the technology and process.
- The design is constructible using proven technologies in an innovative way.
- The Halo touches the ground lightly and will offset moving parts or exposed ‘live’ electric elements.
- The design maximises the identity and legibility of the proposed Cultural Facility.
- The design creates a strong identity and branding for the Underground Cultural Facility that it connects into.

Technology

We are harnessing the power of the sun. A forest has several layers of canopy. The Halo uses this approach with multiple layers that filter the light. Sphelar ® or similar technology will allow highly efficient capture and conversion while allowing light through. Unlike traditional PV technology, triangulated panels are possible.

In the forest, the high-level leaves are small, whilst low-level ferns have large surfaces. The Halo accommodates increasing density of PV receptors at lower levels. A thorough panel-by-panel solar analysis at a future stage will define these densities.

The Halo is a shimmering object with fuzzy edges. The form mirrors the historic scenic rollercoaster at the nearby Luna Park. It seems to disappear into the surrounds.

The design is scalable for increase or decrease in output.

ASHDORO ENERGY STORY

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Clean Energy Output

- It's an all-electric building, the Halo uses an average accumulative efficiency of 18% using Sphelar ® solar technology.
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Return complexity vs energy output

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Embedded Energy

- Strategies for lowering the embodied energy include local partial-manufacture and assembly of the frame panels.
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Adherence to Brief

- The St Kilda Halo has been designed to enhance the cultural heritage of the site. The design maximises the opportunity for human interaction with the structure and encourages people to learn about the technology and process.
- The design maximises the identity and legibility of the proposed Cultural Facility.
- The design creates a strong identity and branding for the Underground Cultural Facility that it connects into.
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Ad hoc energy

- The energy Story tells us how nature gathers sunlight through layers of forest canopies to implement photo-voltaic technology in an innovative, three-dimensional array. Layers of transparent, photovoltaic foliage filter energy and provide lush, dappled shade for activity and events.
- The design maximises the opportunity for human interaction with the structure and encourages people to learn about the technology and process.
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Integrate into Surrounds

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Sensitivities to environmental (local, regional) ecologies

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Clean energy output

- The Halo maximises the identity and legibility of the proposed Cultural Facility. It is a beautiful object that can inhabit the structure and the viewing platform.
- The Halo links down into the underground cultural facility and everyday use.
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Originality + Social relevance

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