

SOUTH-WEST ELEVATION | THE LAWN



PLUME

THE OPPORTUNITY

With the re-envisioning of Melbourne's St. Kilda Triangle, the opportunity to incorporate more contemporary, physical and interactive iterations of cultural appreciation in the Urbanscape has never been higher and their purpose is elevated with the city's Net-Zero target. To achieve an Equilibrium of Form and Function for the site, Grassroots needs and wants were assessed through On-the-Ground Community Consultation¹ which afforded the current Masterplan.

Within these guidelines it became clear that Tradition and Technology, the Past and Future, have to be reconciled into the Cultural Flux of the Present.

This reconciliatory manifestation needed to be Energy self-sufficient and within the dimensionalities that ensured adherence to its supplementary role in the aesthetic of the natural landscape as a whole.

Unlike artistic installations of the past, Social Interaction has to play a pivotal role in maintaining Public Interest as a Key Performance Indicator and, to that end, integration with Social Network Services alongside emerging Immersion Technologies has to be foremost as its design DNA.

Value Creation is, in essence, part and parcel of all design considerations and final output.

THE INNOVATION

Positioned as an ensemble on The Lawn of the current Masterplan, the Innovative PLUME Design is best described through an elaboration of its Overlays – Energy, Tradition and Technology.

The PLUME Energy Overlay is based on Solar Power and, as such, takes advantage of the latest innovative Solar Panel technologies. For its material composition, the PLUME incorporates Solar Panels that are custom-made, high-output Monocrystalline Cell panels with Kromatix Coloured Glass backsheeting. Kromatix is an Architectural standard for today's Solar Panels in their capacity as Building-integrated Photovoltaics and this technology is ideal in providing Value Creation through visual aesthetics as elements of the PLUME of Fire from the Sun. These panels are created frameless and custom-fitted to the size and shape that is required for this design.

With its high-output specifications of 160Wp per square metre in its Kromatix Coloured Glass format, this Solar Panel requires 6.25 square metres to achieve a 1kWh Energy output design. This 1kWh output, when calculated for the sunlight of the

St. Kilda Triangle area, is estimated to provide 3.68 kWh of Energy daily, providing more than 150 Watts of electricity for a full 24 hours, enough to power the equivalent of three laptops during that time. As the PLUME utilizes two Solar Panels in its design, this 2kWh configuration is expected to provide 7.36 kWh of Energy daily, providing more than 300 Watts at the equivalence of two 61" televisions running for a full 24 hours, which is more than enough for both its Kinetic and Light functions throughout each day.

As a self-sufficient Energy generator, the PLUME is estimated to produce 2,683.41 kWh of Energy annually.