The St. Kilda neighborhood is a culturally rich area with deep and proud musical roots running within the community. The Palais Theater has been the home for musical viewings the like for decades. It serves as the armature for the development and growth of great musical groups, including Met at Work and Hunters & Collectors. In recent years, the Palais Theater has been a multi-function host with a diversity of shows that bring new audiences than before. However, the ever-expanding community of music lovers still finds itself congregating in this area for larger outdoor festivals. This evolution was an intriguing characteristic of the site suggested that it was asking for further investigation. Imagine now, a permanent and beautifully integrated location for this variety of festivals not only celebrating the musicians and their craft, but celebrating the local culture at the same time.

Cultural celebration is the bedrock that provides the strength and stability to the St. Kilda Cultural Beacon; with this idea stems several branches that inform the architecture, landscape and sustainable resilience within the Triangle.

Through studies of the site, the large shift in elevation proved to have beautiful potential in how we can begin to celebrate the natural and man-made landmarks and the scenic horizon. The preservation of these viewports began to shape where and how the landscape could merge with the architecture to create a seamless flow, all the way from the Esplanade to Jacka Boulevard.

There has always been an idea to enhance the contextual and cultural experiences within the Triangle: the slopes, the lawn and plazas are other cultural aspects that will be celebrated in this design. The incorporation of these various cultural zones root this project and the celebrations into the communal and urban context.

The New Slopes guard not only a large portion of the architecture and landscape but they protect the view looking out into the water, shielding the inhabitants from some of the more distracting parts of the urban context and refocusing the visitor’s vision. The New Slopes also mark the footprint of the Cultural Building along with large atrium spaces designating public gathering spaces and workshops. It is within this cultural building that we begin to see exactly how connected these zones actually are. There are underlying secondary paths that connect programs including the Cultural building, the new Theater, and the Palais Forecourt.

Acting as a physical joint or hinge, the Lawn in collaboration with the new Jacka Plaza creates a circulatory axis and a central public urban space that weaves the larger gesture of the proposal together. With the mixture of hardscape and softscape, the lawn is a multi-purpose space that adapts to the venues at hand.

The Grove, a new addition to the master plan, brings a unique interpretation of a contemporary grove. While it still provides the primary function of a grove, a beautiful shading condition, this iteration of a grove provides an alternate option during the hotter times of the year to seek shelter from the intense solar rays. The primary system seen in this zone is the gathering of the proposal’s sustainable energy solution: The Vortex Bladeless Turbine.

The Vortex Bladeless Turbines serve several functions within the proposal. Its primary function is to designate varying areas and spaces to the public. Imagine these large seamless pylons or way-finders acting as beacons throughout the triangle and even throughout Melbourne, this will create a destination for not only St Kilda but for the larger community. The turbine’s secondary function is to bring power in multiple scales with each feeding and storing power to different areas. The smaller vortex turbines are able to efficiently power the local site including the Palais Theater while leaving the larger turbines the ability to send power back to the community.

The St Kilda Cultural Beacon is envisioned to be a healthy cycle of interaction between the municipality, the community and the architecture. Culture and the celebration of such culture acts as the axis in this cycle. This proposal welcomes all to celebrate this rich and beautiful experience in a unique urban artistic design.

Technology:

http://www.vortexbladeless.com/

This project incorporates the Vortex Bladeless Turbine technology. This technology is made of a carbon-fiber mesh mounted on a metal spine. It utilizes the Vortex Induced Vibration Phenomena, thus giving the proposal a silent yet effective technique of storing and gathering energy. There are two scales of the turbine technology that are utilized: Vortex Grand and Vortex Mini. The proposal’s Vortex Grand (Large) span at 25 meters high which collect 4,380,000 kwh annually, each. The smaller iteration, the Vortex Mini, span at 8 meters high and collect 350,400 kwh annually, each. In total, the St Kilda Cultural Beacon proposal generates 37,843,200 kwh annually.

Environmental:

The proposal for St Kilda Cultural Beacon utilizes many techniques in passive cooling and sustainable resilience to create a carbon-neutral and zero-impact footprint. In coordination with the Vortex Bladeless Turbines and the openings they create within the architecture, there are several moments that utilize the natural occurring wind paths to cool and ventilate the interior spaces; there are more iterations of passive air flow using the curvature and particular cuts within the landscape to passively cool the exterior spaces. Orientation is a vital element in the preliminary design of the proposal, through various well oriented systems they utilize the different elements in the area. Wind channels coming from the shoreline and north-south wind paths help the ventilation that was described earlier. The architecture also is oriented in a way to fully employ the passive heating through the sun paths with large glass facades. In a more practical turn, the larger landscape gestures within the proposal are taken from the excavation within the site, all cuts and additions to the landscape are proportional creating no loss in the land use.