

# A R C L I G H T

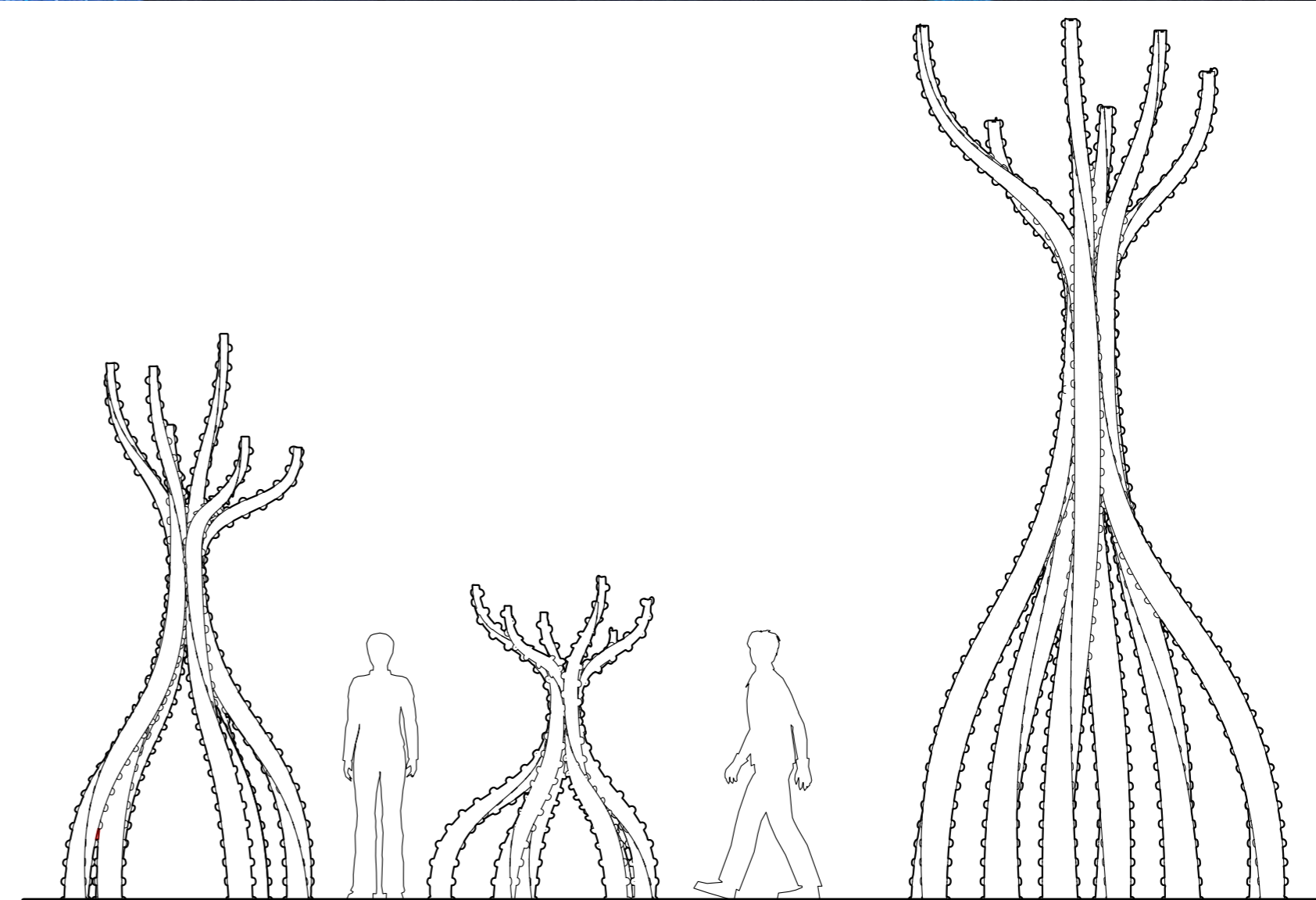


## PROJECT DESCRIPTION

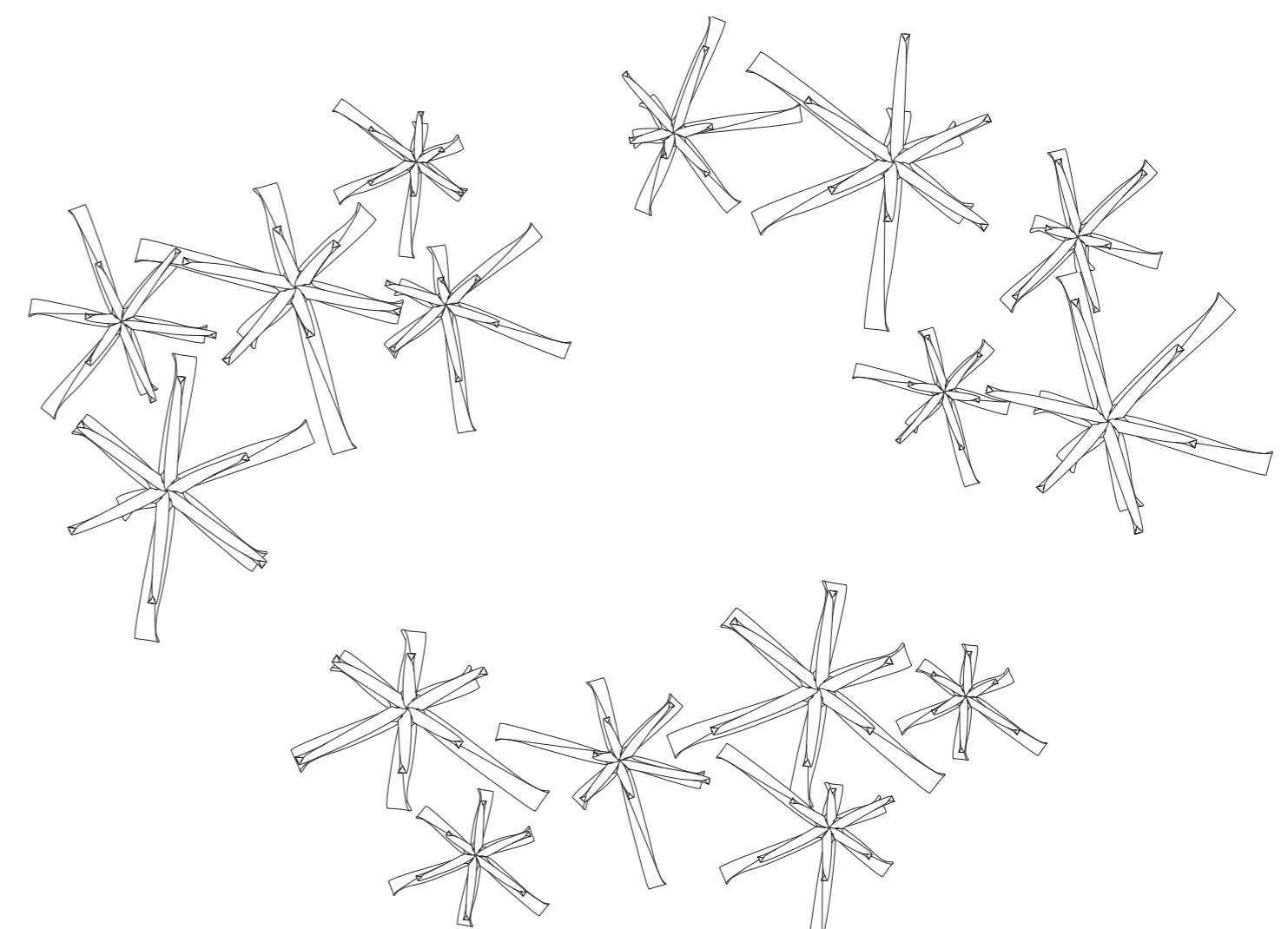
Arclight is an interactive lighting installation put on display as part of the Sydney Vivid festival in 2015. This spatial and atmospheric project brings the quality of architectural inhabitation and visceral experience to an urban festival through a biomimetic proposition emulating dense bundled systems found in the natural environment, such as Australian mangroves or Strangler Fig trees, using parametric tools and digital fabrication processes.

3 groupings or 'thickets' of 'trees' are made up from elements ranging from 2.4m tall to 7m (8'-21'), of which there are 18 bundles overall. Each bundle is made from 6 grouped strands, formed into triangular box sections from riveted HPDE plastic sheets. A principle aspect of the research involves the testing of sheet thickness and the introduction of a shear connections to induce double-curvature into the flat-cut material. An integrated workflow from computational tools to full scale prototyping was developed to carry out the project. Testing and engineering of the individual member strength and the composite strength of bundles was pursued for delivery of the project for a high wind exposure site (60+ mph) and for hundreds of thousands of pedestrian occupants.

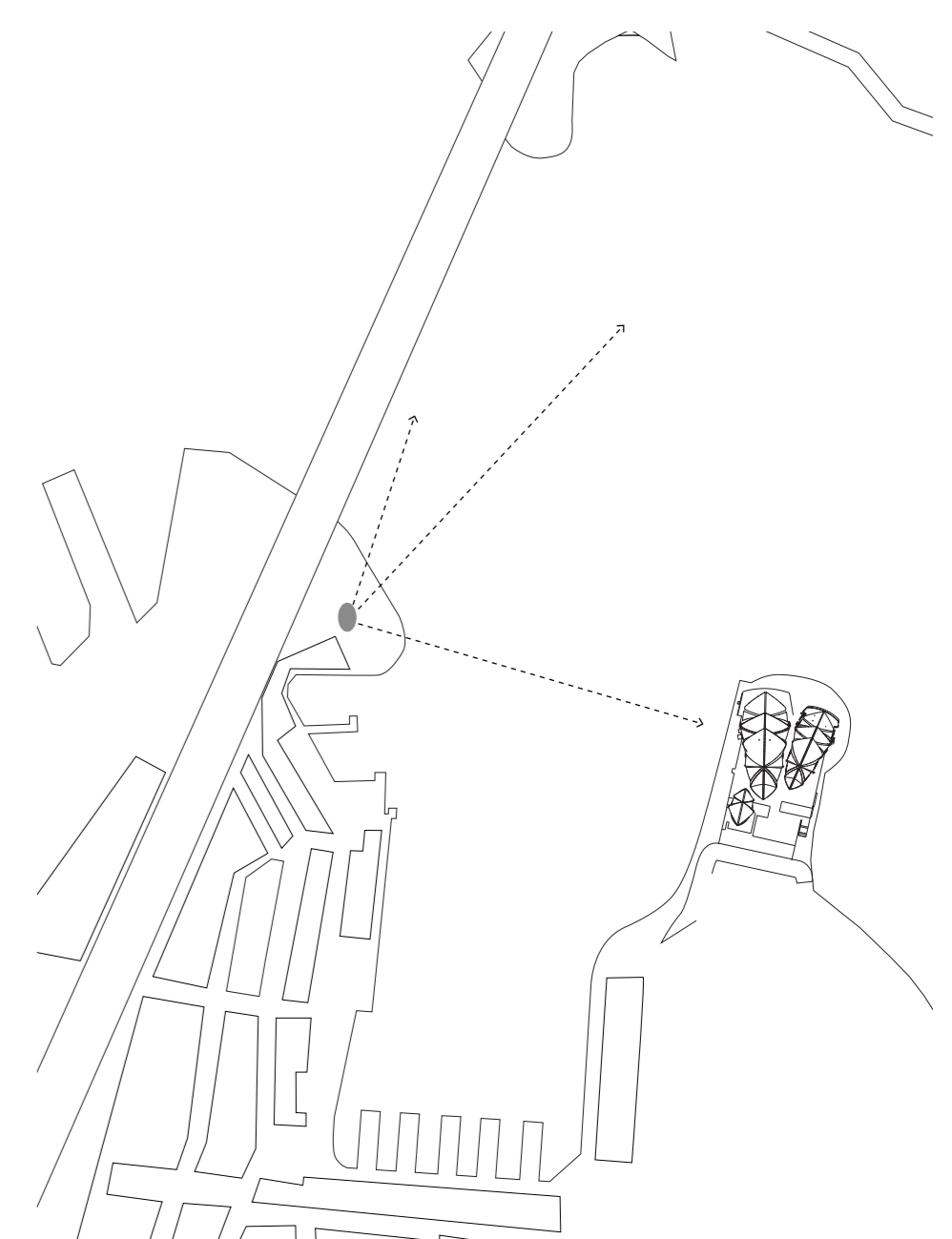
The pavilion offers pedestrians an experience which is at once atmospheric and ephemeral - bathing occupants in the soft glow of concealed light. The installation serves as a register of the non-human environment. Embedded LEDs parse an environmentally driven data set, which provides a dynamic ambient interaction rather than the direct sensing of human actions. The result is an experience for occupants which is fluctuating mysteriously and indicative of a context beyond immediate human comprehension.



ELEVATION OF 3 HEIGHT MODULES: 5m, 2.4m, and 7m



PLAN DIAGRAM OF GROUPED THICKETS



SITE LOCATION PLAN