

INTERTIDAL OBJECTS

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Looking at intertidal ecosystems, we designed and built prototype ecological installations to cultivate habitat conditions for native species while providing erosion protection of the shoreline.

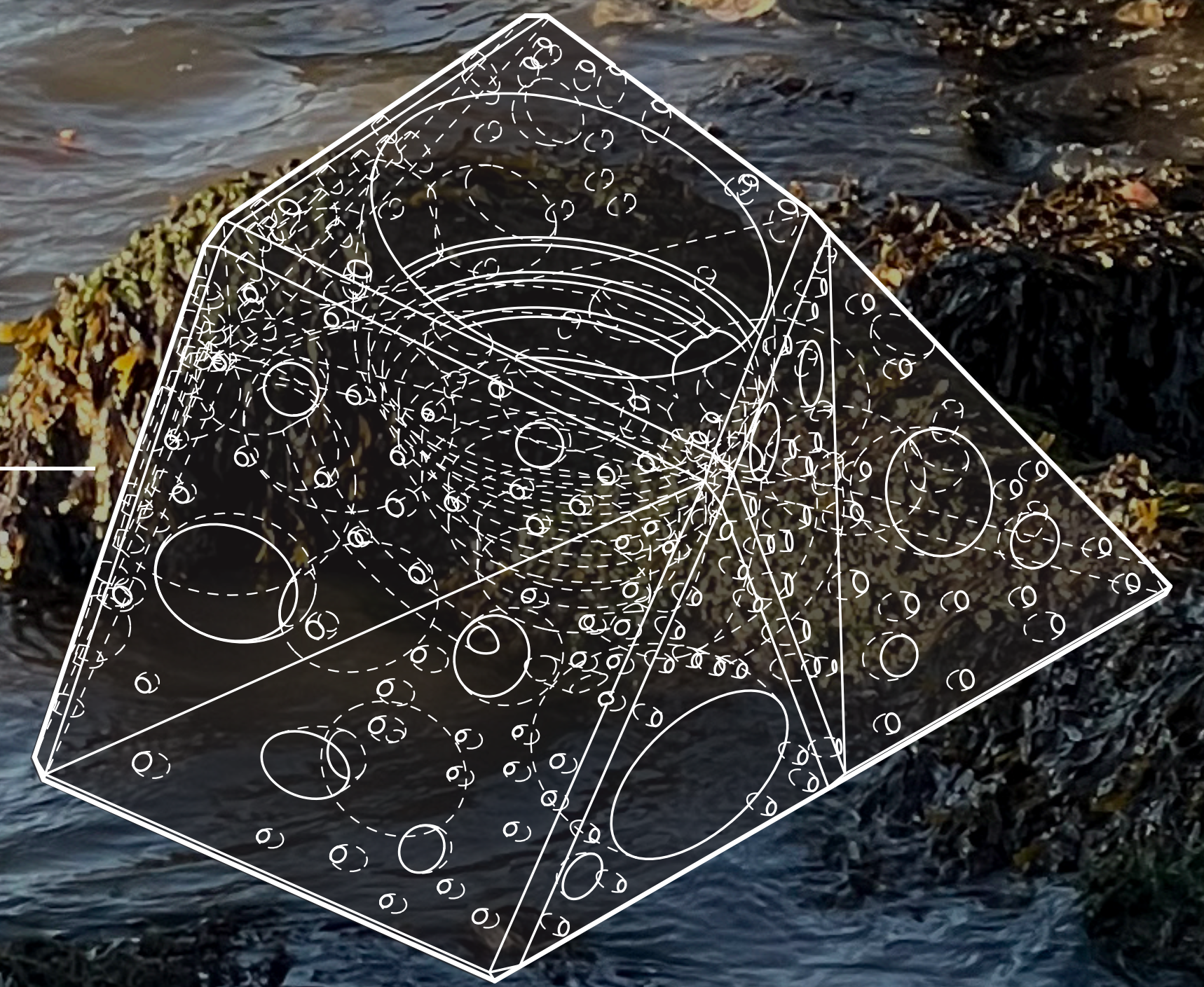
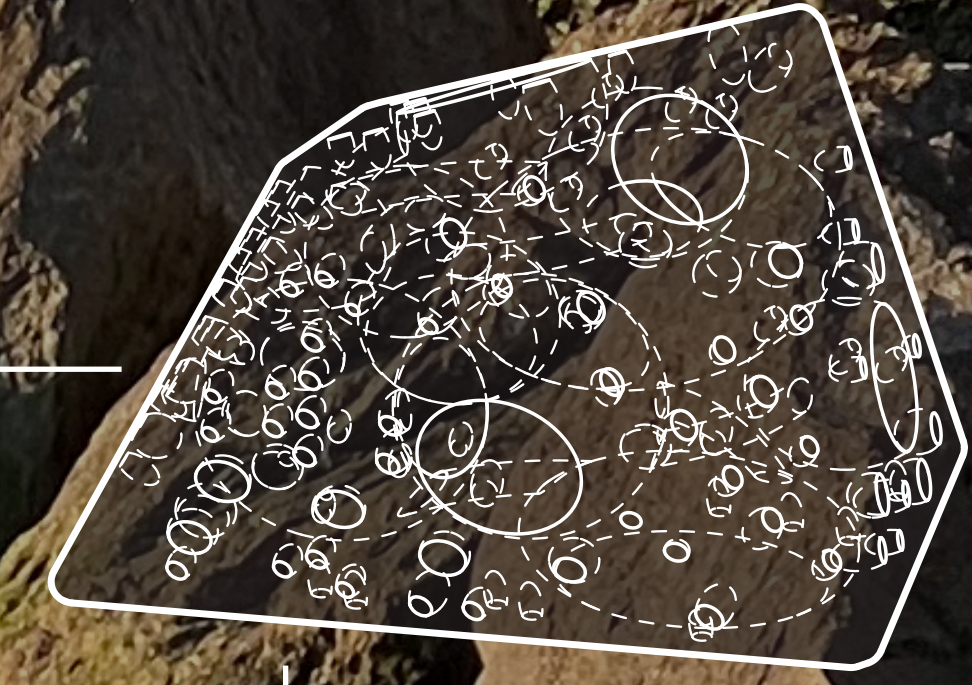
Much of today's urban coastline exists as hard sea walls or "riprap" - large, piled stones or other durable material - used to armor the coast against erosion and wave action. "Intertidal Objects" aims to promote a living shoreline in which the coasts exist in softer forms with vegetation and other life that mitigate against storm surges.

When placed in intertidal waters, these units are intended to create micro-environments for small aquatic creatures and algae. The geometric shapes yield miniature tidal pools and promote plant growth through voids and surface articulations. The objects have to perform yet create visual interest as they will be visible along the shoreline.

Formwork systems were designed and constructed using a combination of CNC milling for the form liners and simple carpentry for the forms themselves. The units were fabricated on Rensselaer's campus in Troy, NY and then installed at Randall's Island Park, where a marine biologist will observe the efficacy of the proposals over time. It took only a matter of weeks before marine plant growth began rooting on the objects, supported by the brackish, yet nutrient-rich waters where the Harlem River and East River converge.

This study pulls together disparate strains of inquiry including form-making, material science, construction techniques, urban waterfronts, and ecology.

Intertidal Unit
1.0m x 0.6m x 0.6m
Concrete, Reinforcing Fibers

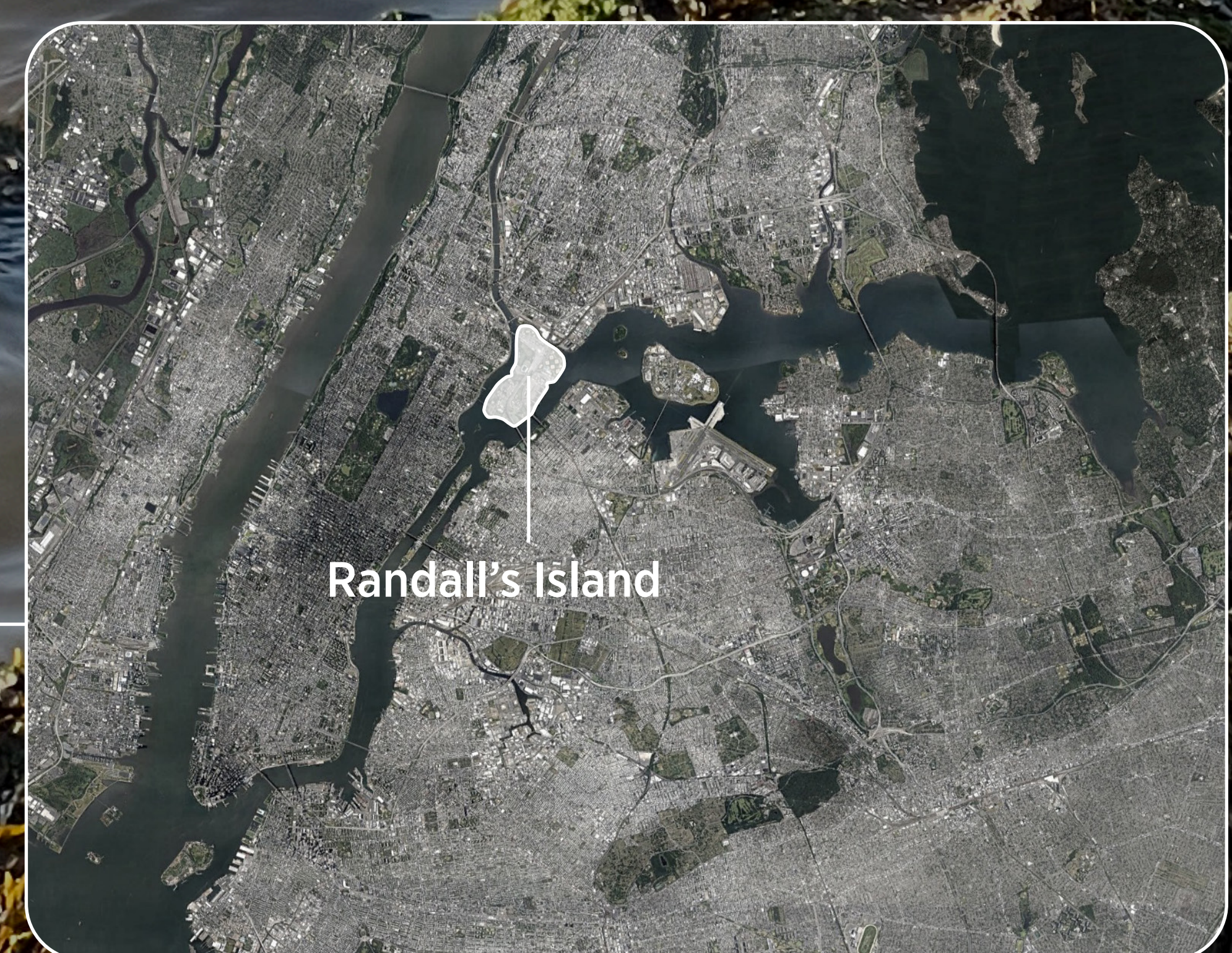


Rockpool Unit
1.3m x 1.5m x 0.8m
Concrete, Reinforcing Fibers



Concrete being poured into plywood boxes with CNC milled form-liners.

Randall's Island is located within the New York-New Jersey Harbor Estuary.



Randall's Island