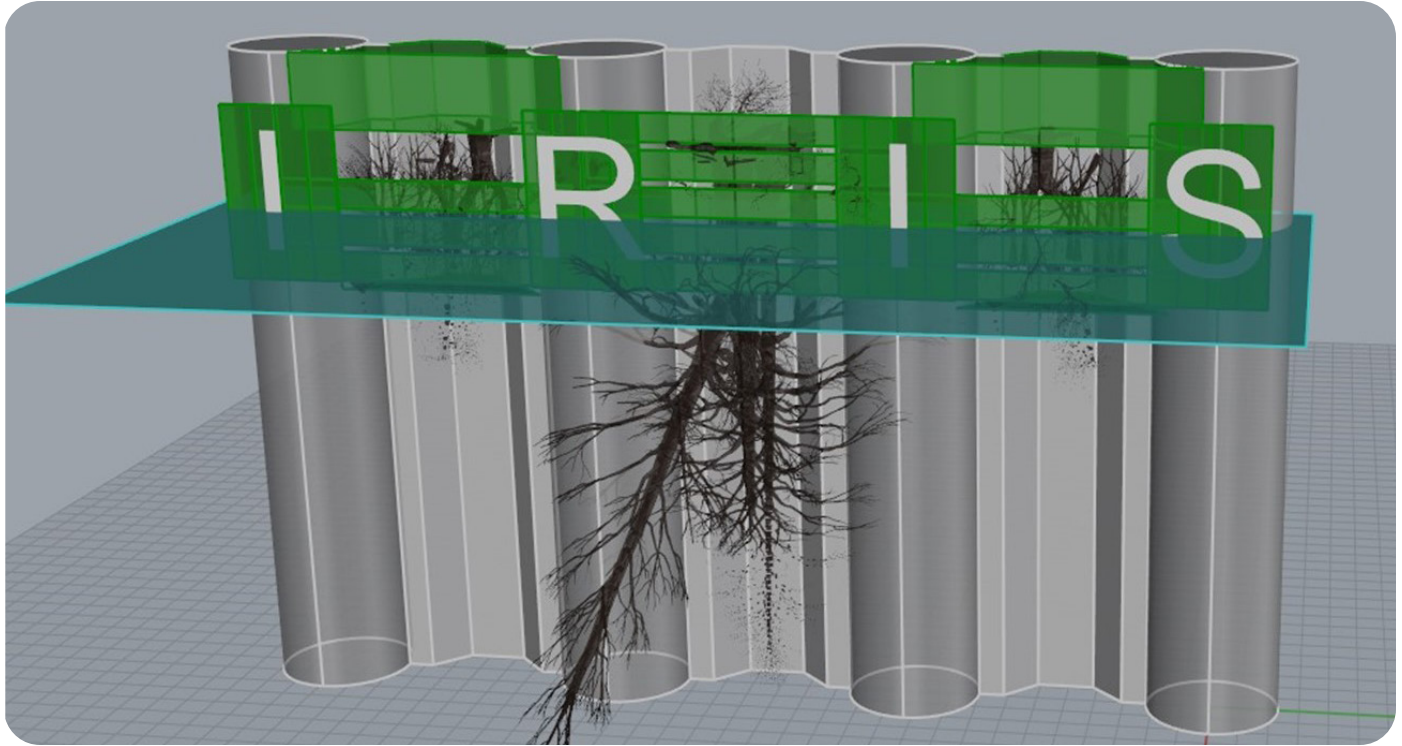

West Creek Conservancy & Cleveland-Cuyahoga County Port Authority

Irishtown Bend Green Bulkhead Project

Cleveland, Ohio



The Irishtown Bend Green Bulkhead is intended to enhance the survival of Cuyahoga River's larval and juvenile fish, essential for the long term health of Lake Erie.

SERVICES

Ecological Restoration
Nature Based Solutions

Located along the west bank of the Cuyahoga River, Irishtown Bend was once a settlement for Irish immigrants. After it was cleared in the mid-20th century to accommodate river dredging and widening, the vacant hillside became a risk for collapse into the Cuyahoga. A multi-phase effort, funded by Federal and state agencies including Great Lakes Restoration Initiative and involving numerous partners and stakeholders, was launched to stabilize Irishtown Bend and transform it into a public green space. Slope stabilization involved armoring the shoreline with a bulkhead deemed essential to prevent collapse.

As the stabilization team's ecological consultant, Biohabitats' role was to improve the bulkhead design so that it maximized ecological value and habitat within narrow design constraints. Drawing on the firm's experience in coastal restoration as well as the biomimetic design behind their award-winning prototype green bulkhead along the hardened Cuyahoga shoreline, Biohabitats explored a variety of options. In an effort to soften the shoreline, Biohabitats first considered a series of aquatic and wetland habitat features behind the bulkhead, which proved infeasible. Biohabitats then developed a design to create green bulkhead habitat structures within the crenulations of the bulkhead. Planter boxes will be installed every third crenulation and planted with overhanging vines to provide shade. The design includes a stormwater-fed system to irrigate the planter boxes. Biohabitats also designed the planting plan for two stormwater ponds that are fed by groundwater and stormwater runoff to create a rich emergent wetland shoreline that will ultimately become part of the park.