

LIVING SHORELINE CASE STUDY

IN PARTNERSHIP WITH THE ELIZABETH RIVER PROJECT

Lafayette River Living Shoreline



ROOTS TO RESTORATION

Mary Carol and Littleton's living shoreline was as much a preservation of their waterfront as it was a celebration of family history.

Littleton, or 'Lit' as he's better known, has fond memories of the family home which has been under their stewardship for over seventy years. Once belonging to his grandfather, Lit treasures a live oak tree on the property, which he refers to as the "Grandmother Tree". Lit has always believed that the live oak tree perfectly captures the iconic beauty of the region, but over time erosion began to take hold of the waterfront property. Just 10 years ago, a long-standing pier was reconstructed to increase its height by a full foot to address rising water levels during spring high tides. In addition, a shoreline area that was once used as a boat launch became a soggy bog. The combination of these factors led Lit, and his wife, Mary Carol to consider a new approach to maintaining their cherished shoreline.



"We have a beautiful live oak that sits right down at the very edge of our shore; it's a significant feature of the property. Unfortunately, over the last twenty years with the rising water level the tree has been undermined. We were potentially going to lose it."

– LIT, HOMEOWNER

By chance, several years ago, the couple hosted an Elizabeth River Project (ERP) employee at their home. It was during this visit that they learned about the possibility of constructing a living shoreline at their property. The reputation of the ERP had always impressed them, so they decided to partner with them to complete a living shoreline project. During an initial site assessment, the homeowners learned that their property was also an excellent location for an oyster reef. Oyster Castles™ interlocking blocks made from a blend of concrete and oyster shells—were used to create a sill structure, which runs parallel to the shoreline, slowing down wave energy. Coir logs—a natural fiber product used to protect shorelines from erosion—were placed along the waterfront, and wetland grasses were planted around the live oak to protect its exposed roots.

The cost of the project was shared between the homeowners and grant funding from the City of Norfolk's contract with ERP for their River Star Homes pledge program to protect the Elizabeth River watershed. The project was completed in a year and a half, which included several months of permitting and a few weeks of construction. Permitting was processed through the U.S. Army Corps of Engineers and the City of Norfolk with very few delays. Mary Carol and Lit describe the process as being straightforward and with no significant challenges. In addition, the ERP was able to facilitate this project while the homeowners worked abroad. Upon their return, they were highly satisfied to find a finished living shoreline, which restored native trees, grasses, and bushes. The oyster reef, in particular, led to a resurgence in wildlife.

"The opportunity to create an environment for water birds, an extension of the wetlands... was very attractive to us. The outcome is a beautiful piece of waterfront property that is clearly feeding into the oysters, which we love. As well as supporting crabs and other sea creatures... what we are able to achieve, for what I feel was a modest investment, it transformed the shoreline."

– LIT, HOMEOWNER

It has now been five years since the initial installation of the living shoreline and Mary Carol and Lit look forward to spending their retirement years at their home. They feel a sense of pride knowing their shoreline, and Grandmother Tree, will be protected for years to come.

"Being on a shoreline you're subjected to the elements and having a shoreline be resilient to the storms and exceptionally high tides... and not see the erosion, but actually recovery in some areas...it's really quite a positive outcome."

- LIT, HOMEOWNER



Mary Carol and Lit recommend waterfront property owners consider living shorelines. In their view, it should be the first choice for any homeowner. They have seen firsthand how a shoreline is best protected by a natural ecosystem. Additionally, they believe that the long-term vision for their property was realized by consulting with living shoreline experts and advisory organizations. During each phase of the project, professionals offered guidance and, in turn, accelerated and simplified the process. Most importantly, the homeowners have found that by embracing a natural approach, they have restored the lush beauty of their property and enhanced wildlife habitats.