

## Reservoir Dogs - Shoreline Protection



### Lockwood Reservoir Shoreline erosion control installation

Salix were brought in to help with a sensitive erosion problem on a reservoir spillway in North London.

The reservoir, which has a crest length of around 2,670 m is impounded behind an earth fill embankment dam which has a puddle clay core at its centre.

Over much of the inner embankment face, the inner face is initially grassed and slopes at around 1v on 4h between the dam crest and the coping to the curved concrete wave wall. Below the concrete wave wall the embankment face slopes at around 1v 4h and is protected by a combination of concrete slabbing and concrete slabbing overlain with Open Stone Asphalt.



Rapid germination in VMax C350

### Products Used

- Rock Mattresses
- VMax C350

## A combination of Rock Mattresses and VMax C350 were used to create a strong revetment whilst providing habitats for wildlife.

Along the western side of the reservoir over 700m of the internal face of the embankment is unprotected and was suffering from wind wave erosion along its length.

The erosion had formed a noticeable notch at around top water level with a series of inlets and shallow beaches in a number of locations.

The solution chosen was to reprofile the inner face along this length of the embankment and then protect the surface by the placement of ready filled Rock Mattresses with Vmax C350 installed above.

Embankment protection was required together with crest road enhancement.

The prefilled Rock Mattresses offer a robust engineering solution to the erosion problems but also provide an environmentally beneficial outcome by

using small stones that accrete sediment, encourage vegetation to establish and provide invertebrate habitat within the stone.

The Rock Mattresses arrive on site ready filled, so installation is very quick with no stone wastage. The quality control at our factory manufacturing the prefilled mattresses ensures a consistently high quality finish on site.

It is the stone size in the Rock Mattresses that delivers the high level of erosion protection in a thinner layer than would have been necessary if traditional stone riprap was used.

Over time the solution will blend seamlessly into the environment providing long term erosion control with a greener, softer visual effect.

Padraig McCormack the Construction Manager for MWH Global said:

“..the way the works were conducted in a professional, safe way and clearly demonstrated your expertise in this field.”



**Installation of Rock Mattress**