



matt durbin associates
.....engineering integrity

Cake Pill Outlet Structure Refurbishment

The existing tidal structure located at Cake Pill in Aust, Somerset was suffering from a severe case of scour under the reinforced concrete outfall slab. This had caused the tidal water to seep up underneath the structure and burst the joints between the precast concrete culvert sections, whilst eroding the backfill material around the culvert units. MDA completed these refurbishment works by firstly excavating in front of the outlet slab and removing the silt, then forming a RC toe beam embedded into the bedrock below. This wall then filled with 40tonnes of 300-500mm granite rock armour to protect the structure and surrounding wing-walls.



Once the curtain wall was formed at the outlet end, a series of 50mm diameter core holes were drilled through the structure at 1m centres and grout was pressure pumped into these holes systematically from inlet to outlet to fill any voids around the structure. This process could be easily monitored by drilling air holes ahead of the grout holes to check that the structure was being fill up evenly. This can be seen in the photos below.



The photos on the left show the setting out and drilling of the core holes through the existing RC slab, and the cleaning of the existing culvert.

The photo on the right is an example of MDA's commitment to the environment and ensuring we are exceeding environmental expectations.

