Project Profile

Matchams Riverbank stabilisation

Duration: 2 weeks
Value: £130,778

Client: Bournemouth Water

Requirement:

The raw water intake at Matchams is located on a fast flowing bend on the River Avon. The building was constructed C.1955 and provides a reliable source of raw water to the WTW in Bournemouth. Water depths are typically 3-5m with a high river flow rate, circa 3 knots, even when not in spate. Delivery requirements were to stabilise the existing riverbank and arresting the damaging scour whilst providing the least amount of environmental impact.

Solution:

TMS were contracted in 2018 and 2020 to carry out an in-water visual inspection of the steel sheet pile wall as well as Cygnus Underwater Ultrasonic Thickness (UT) readings of the sheet piles. During the initial inspection in 2018, TMS observed some riverbank subsidence. Underwater examination revealed that there were several defective clutches and exposure below the sheet piles at riverbed level. This in turn had led to riverbank washout behind the sheet pile wall. By June 2020, the river water depth had increased along the most affected area by up to 1.2m, indicating riverbed scour.

In July 2021 the team at TMS, including a five man dive team, crane operator, excavator operator and slinger/banksman, mobilised to site.

To place the Salix AquaRockBags at the toe of the sheet piled wall, the rock bags were filled using a 21T excavator then the 70T crane lifted the bag up and over to the river. The divers, who were working from a jet float pontoon system being used as a temporary diving platform, then guided the 4T bags from the riverbed into the position as per the design drawings. The bags were secured/knitted together with a high quality tensile synthetic 20mm tiger rope.

Despite working during the hottest two weeks of the year, with temperatures in the low 30s°, 120 bags were assembled and installed within 10 days, providing a long term protection to the water intake structure.