

Coolham Riverside

Sheet Pile Retaining Wall

CLIENT

Avanti Gas

CONTRACTOR

C J Thorne

DESIGNER

HOP

Requirement

At the Avanti Gas site in Coolham, West Sussex, a steel sheet pile retaining wall runs along the site boundary directly beside the River Adur. The brief covered two connected needs: stabilising the existing sheet pile wall and providing a horizontal prop force to a new section of sheet pile wall installed further along the same boundary, combining remedial and preventative works within a single scheme.

The site's position on the riverbank was the defining constraint. With the watercourse running immediately alongside the works, drilled and grouted anchors carried an unacceptable risk of grout spillage entering the river, so a mechanical, driven anchor solution was required from the outset to eliminate that risk entirely.

Testing

Anchors were designed to target the Weald Clay formation identified in the Ground Investigation data supplied as part of the enquiry package. Design loads were set by designer HOP in accordance with the relevant Eurocodes, and Anchor Systems confirmed the anchor selection through on-site suitability testing, achieving 175kN. Every anchor installed was then proof loaded in line with HOP's design document, giving the design team the verification needed to confirm the scheme met the required load capacity along both sections of wall.

Solution

Anchor Systems specified two Vulcan® driven earth anchor types to suit the differing load requirements along the boundary: AS-120 anchors with a 20mm galvanised steel tendon, and AS-300 anchors with a 25mm galvanised steel tendon. Both anchor types were selected following discussions with HOP to meet their load requirements and confirmed by site suitability testing. As mechanical, driven anchors, neither required grouting, removing any risk of spillage into the adjacent River Adur.

Installation was carried out using a 13-tonne excavator fitted with a hydraulic breaker, with Anchor Systems providing on-site instruction to contractor C J Thorne in the safe and correct use of the installation equipment, enabling their team to complete both installation and testing directly. The result is a stabilised existing sheet pile wall and a properly propped new wall section, delivered with a riverside-safe anchoring solution that met HOP's design requirements throughout.

