DUCKBILL®
Ground Anchor Systems

PROJECT REPORT

'INVISIBLE' STABILISATION OF FLINT RETAINING WALL SEWELL PARK, NORWICH

Client: **Norwich City Council**
Structural Engineers: **Norwich C.C. Engineers Dept.**
Installer: **WT Specialist Contracts Ltd**

Requirements

An attractive and historic flint retaining wall alongside Sewell Park, Norwich, was bulging and required stabilising but the City Council wished to avoid having a row of unsightly pattress plates.

Consequently, it was one of the first projects to benefit from using Combi-Tec, developed by Anchor Systems to provide a fully concealed top termination for its ground anchors.

The 1.5m high flint wall forms the boundary of the park adjacent to a local road. Age, water and a nearby large tree (secured with MR1 temporary anchors while the wall was stabilised) had all contributed to a bulging 15m section that was threatening to collapse into the road.

Solution

Stainless steel Duckbill MR2 anchors with 16mm high yield bars and Combi-Tec concealed top terminations were specified by the Council's Engineers Department. Installed by sister company, WT Specialist Contracts Ltd, the anchors were inserted through 102mm diameter core drilled holes in the flint wall, hammered 6m into the ground and then proof loaded to 36kN.

Combi-Tecs, comprising anchor body, special polyester sock and front plate, were inserted over each anchor bar, with the plate sunk below the wall's outer surface. The socks were pressure filled with cementitious grout and left to cure for seven days. The expanded socks filled any voids and, once cured, formed solid mechanical and chemical bonds within the wall.

The Duckbill anchors were then tensioned to an 18kN working load and secured to the plate before the flint cores were replaced. Now fully stabilised, the historic flint retaining wall at Sewell Park shows no visible signs of the work undertaken.