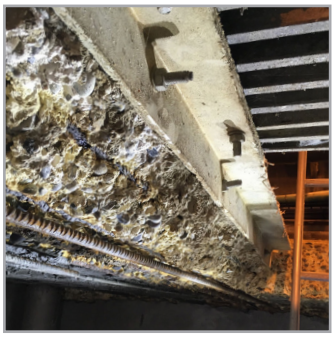
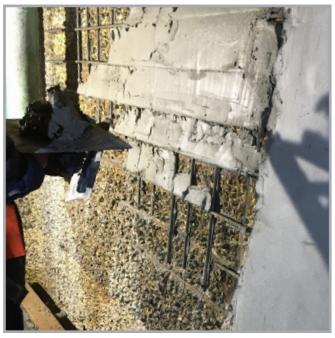
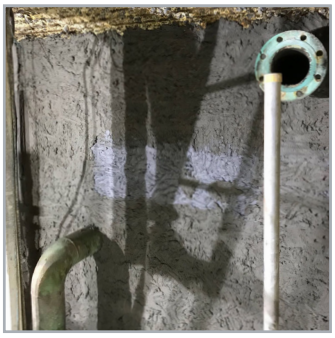
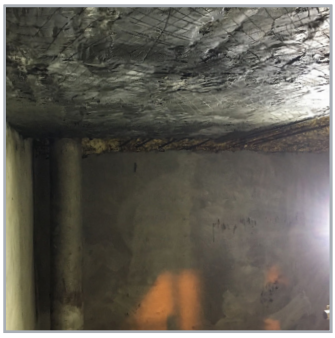
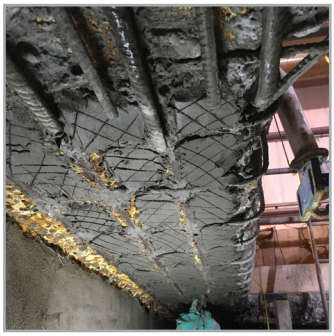
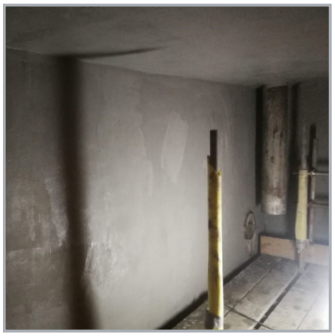
PROJECT NEWS

PROJECT **INLET CHAMBER RECONSTRUCTION**


Due to severe hydrogen sulphide attack, Stonbury were contracted to rebuild a failing inlet chamber at a wastewater treatment works (WWTW), this included the replacement of all defective rebars within the walls.

The chamber received a full inspection, followed by high-pressure water jetting (HPWJ) to clean the substrate, which highlighted defective concrete and several lengths of steel reinforcement that were in deplorable condition.

Once the defective concrete was removed, the reinforcement was replaced in sections due to concerns regarding the integrity of the structure. A waterproof concrete repair mortar was then applied to a max depth of 100mm, using a hand and trowel method. The material was applied in layers to prevent the render from falling off the walls.

As works progressed, concerns were raised regarding the safety of the team due to the severe deterioration of the soffit, and the client suspended all works until a 'temporary works design' was put in place.

The structural engineer report stated that the soffit was to be broken down and that a new, 12mm rebar was required at 150mm centres.

Two coats of a bonding primer were applied to the new reinforcement to aid in adhesion and assist in the prevention of future corrosion and rusting. Once cured, a high strength structural repair mortar was then applied in sections to ensure the mortar bonded correctly and that there was no sagging due to the depth of repair required. Within each section, the material was built-up in 4 to 5 layers to achieve the required thickness.

Following the cure period, a water-based, cementitious system was applied to the walls and soffit, to provide a waterproof and chemical resistant finish that will deter future corrosion. Shuttering was then formed around the opening, followed by a concrete pour. Once cured, the chamber was to receive new GRP covers.

Following inspection and signoff, the chamber was handed back to the client and returned to service.