

## PROJECT NEW BUILD INLET STRUCTURE



As part of significant capital maintenance to a wastewater treatment works (WWTW) in Southern Scotland, Stonbury were contracted to construct a new sewage inlet structure during SR15, complete with inlet & outlet DI pipework and an RC magflow chamber.

The treatment works required an upgrade to the inlet screening process to increase resilience in terms of process volume and capability.

Initial works included duct proving, which resulted in the re-use of approximately 100m of existing ducting, offering efficiencies to both the programme and cost for this element of works. The existing draw pit boxers were refurbished and covers upgraded to meet road specification.

During excavation works, several uncharted structures were discovered. To avoid heavy breakout and delays, it was decided that the new ducting would be re-routed to ensure limited disruption was caused to the plant. A number of uncharted underground services were also exposed without damage, demonstrating the importance of safe excavation practices.

Despite several areas of groundwater ingress during the installation of the initial ducting and draw pits, the works were completed to schedule and preparation for the installation of the new magflow chamber began.

A combined sewer was also located within the footprint of the new chamber, which, following a camera survey was deemed redundant and removed from site.

Construction of the magflow chamber was completed and the upstream pipework was installed, along with a new water supply to feed the wash-water booster kiosk. Each connection was heat welded and the new pipes were pressure tested.

A sheet pile cofferdam was installed to ensure safe excavation practice whilst works to the new inlet structure began, 800T of material was then removed from the cofferdam and disposed of, away from site. Blinding and reinforcing steel were installed in stages due to limited space and the twin level structure design.

The construction of the inlet chamber continued for a period of just over four weeks and after the initial concrete testing, works begin to carefully remove the sheet pile cofferdam from the surrounds of the structure and commence backfill.

A new high-density polyethylene (HDPE) water feed for the packaged plant was then installed and all of the redundant channels and pipework were decommissioned. Final works to complete the construction of the wash water booster slabs and skip slabs are scheduled for a later date.