

Scarborough Beach, Perth

J and S series jacking pipes

Case study



Scarborough Beach stormwater upgrade uses trenchless technology

Scarborough the iconic beachside suburb located on Perth's pristine coastline underwent major improvements to its foreshore area under the Scarborough Environs Area Strategy [SEAS] master plan.

To facilitate stormwater upgrades, the SEAS included the installation of a supplementary piped outfall system from a low point in Scarborough Beach Road, east of the major traffic intersection with West Coast Highway.

To minimise disruption in this high vehicular and pedestrian traffic area the City of Stirling made the decision to construct the pipeline using trenchless technology. DJ MacCormick Contractors were awarded the work and installed 350 metres of Humes DN900 J series and 22 metres of DN500 S series jacking pipes.

The J and S series jacking pipes being 2.4 metres in length and designed to cope with maximum jacking loads of 420 tonnes were installed in four drives of up to 130 metres in length.

Due to a minimal overcut of 10 mm and variable ground conditions ranging from sand, limestone, calcarenite capstone and cavernous voids at depths of 5 to 6 metres the injection of bentonite/grouting was of major importance. Humes cast grout sockets into every fourth pipe to ensure the jacking operation ran smoothly.

In total 2 launch shafts and 3 receival shafts were required to complete the jacking operation. As work progressed access chambers were constructed in these shafts following removal of the tunnel boring machine. The location of access chambers mirrored shaft locations to minimise surface footprint and inconvenience to the community.

The works were completed a month and a half ahead of schedule, well before the foreshore area's busy summer period ensuring the City of Stirling and community in general were extremely satisfied with the end product and service provided.

Project

Scarborough Beach stormwater upgrade

Principal

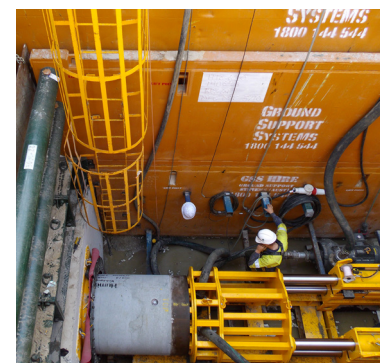
City of Stirling

Contractor

DJ MacCormick Contractors

Products supplied

350 m of DN900 J series and 22 m of DN500 S series SRC jacking pipes



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