



SHAFT SINKING AT PARSONS STREET UNDERBRIDGE, BRISTOL.

Client:

Network Rail

Summary:

Construction of a new dual carriageway.



PROJECT DETAILS

SHAFT SINKING

The proposed route of a new dual carriageway was fouled by existing live Network Rail lines. To allow the road to be constructed a new under bridge is required which will carry the railway above the new road. The bridge is to be supported on four large piles that will transmit the loads to a suitable rock strata. The piles are located in very close proximity to the live lines and this required steel piles to be installed to support the track.



Using our horizontal directional drilling equipment we installed eight large high tensile steel rods horizontally below the live railway track, these rods were then utilized as tie rods to link the opposite pre piled walls, preventing any deflection or rail movement.

Following the pre-tensioning of the tie rods a reduced level dig was undertaken to reach the top of pile level. The piles were formed by constructing four DN3000 x 20m deep segmentally lined jacked caisson shafts, prefabricated steel reinforcement cages were lowered into the shafts, the shafts were completely filled with ready mixed concrete to form the piles on which the bridge superstructure will be built.

GROUND CONDITIONS

- Firm CLAY overlying weak MUDSTONE overlying strong SANDSTONE.