



HARD INGS ROAD

CONTRACT NO.

C21345

Highways & Bridges

HOWARD CIVIL ENGINEERING LTD

As part of the road widening/improvement scheme at Hard Ings Road, Keighley, permanent sheet piling is to be installed to form new retaining walls.

6m long and 7m long L604 sheet piles are to be installed.

Due to the proximity of the new retaining wall to the existing 'Fibreline' building, silent/vibration free piling methods was used where necessary.

The Allotment wall section of retaining wall was partially installed using a side grip vibratory hammer (handled by a 38-tonne excavator). Piling commenced at the furthest point on the wall away from the Fibrelone building with vibration monitoring set up.

Vibration monitoring was set up at the corner of the existing building to ensure the trigger level of 2.5 mm/s was not exceeded. Monitoring was set up a day prior to starting piling to gain background monitoring results.

Whilst piling is ongoing using the side grip hammer at the Allotment Wall, the Tosa 'Stillworker' will be set up on the piling line at the Fibreline car park. The Tosa was set up on its reaction stand on a $5m \times 5m$ pre-formed pad, set 500mm below the finished top of pile level.

The Tosa was used to install the first 3 nr piles by hydraulically pressing the sheet pile into the ground (ground conditions were soft to firm clay). Water was introduced at the pile position to ease the pressing process.

The Tosa was then lifted off using the 50-tonne mobile crane and replaced on the piling line at Bay 7 to install piles heading in the other direction. Once the piles were installed to Bay 6, the pile press was then lifted off and moved over to a 2nd reaction stand pad at Bays 4/5.



PROCESS

TOSA STILL WORKER







