*ABI Equipment Limited was chosen to supply specialist equipment consisting of a Delmag RH34 rig by contractor PJ Edwards Ltd for the piling work on the Heads of Valley A465 road widening project in South Wales.*

*P J Edwards Ltd was appointed by Carillion PLC.*

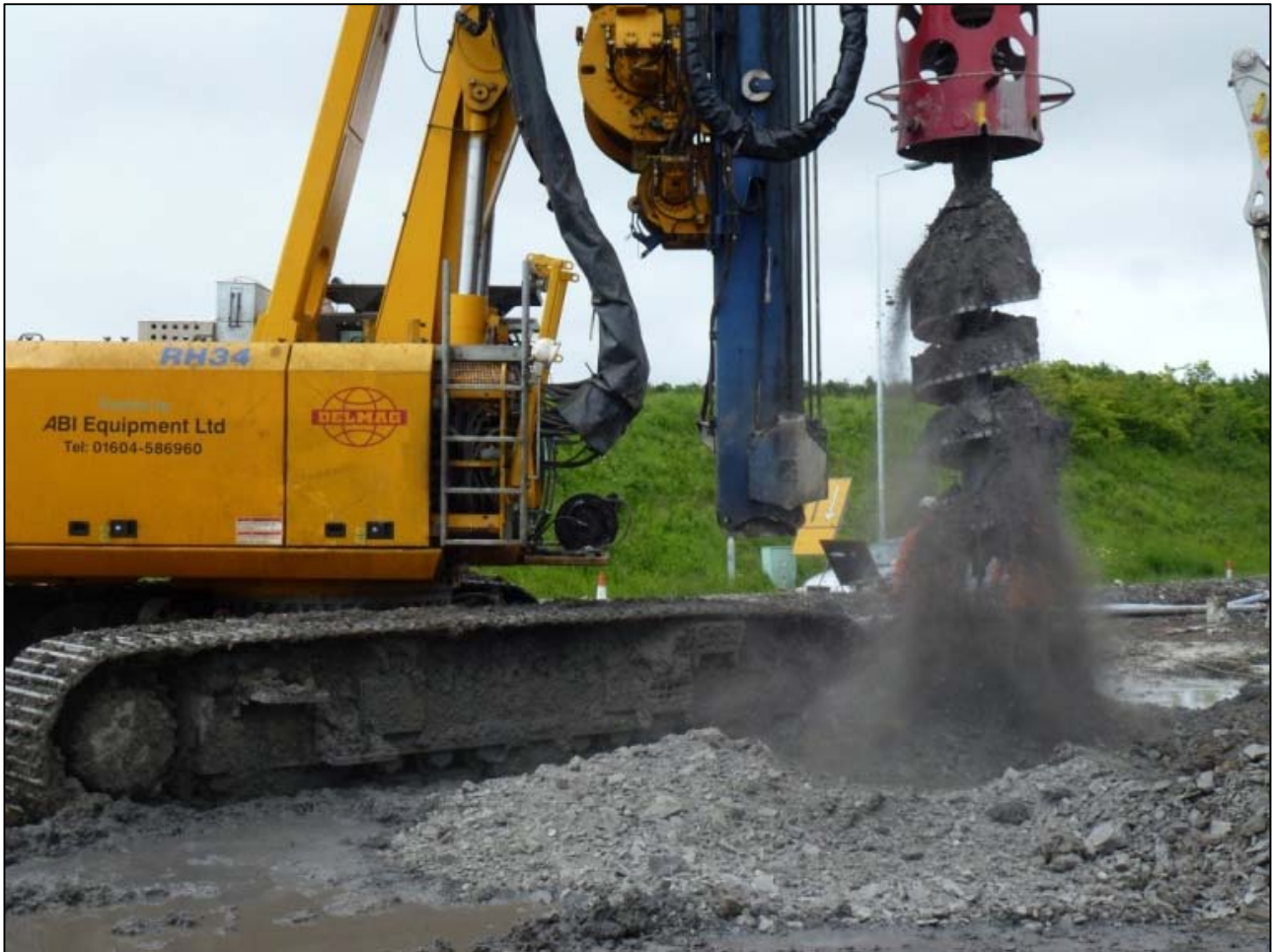*The piling works were carried out from June to July 2013.*

The contact involved the installation of bridge abutment and wing wall piles on the Heads of Valley A605 road widening project.

The pile installation encompassed the risk of old mine workings, artesian water strikes and the penetration of the very tough and variable ground conditions. The piles were installed through superficial glacial deposits and socketed into the underlying mudstones and sandstones of the Lower Coal Measures Group. The bedrock occurred with intervening bands of very strong ironstone and coal seams. The whole area was described as a shatter zone associated with the adjacent Tredegar geological fault.

The total number of piles consisted of: 33 No OD1300mm; 102 No 1200mm and 103 No OD1000mm using segmental casing and rotary bored piling techniques. Pile depths varied between 17 and 21 metres.

The Delmag RH34 was described by P J Edwards Ltd contracts manager Stuart Watkinson as "something of a Pit Bull Terrier, it was a compact machine with the power of a much larger rig and proved to be reliable, robust, efficient and productive. It enabled us to exceed the required production rates".



Stuart went on to say "this contract was very challenging with regard to the type of ground we were drilling. The 'piling rig grave yard' is one of the nick names for the area. Boring times varied between 3 hours and 2 days on piles that were adjacent to each other. We were changing teeth on augers and core barrels with each dig. We were very satisfied with the productivity and performance of the rig from ABI".