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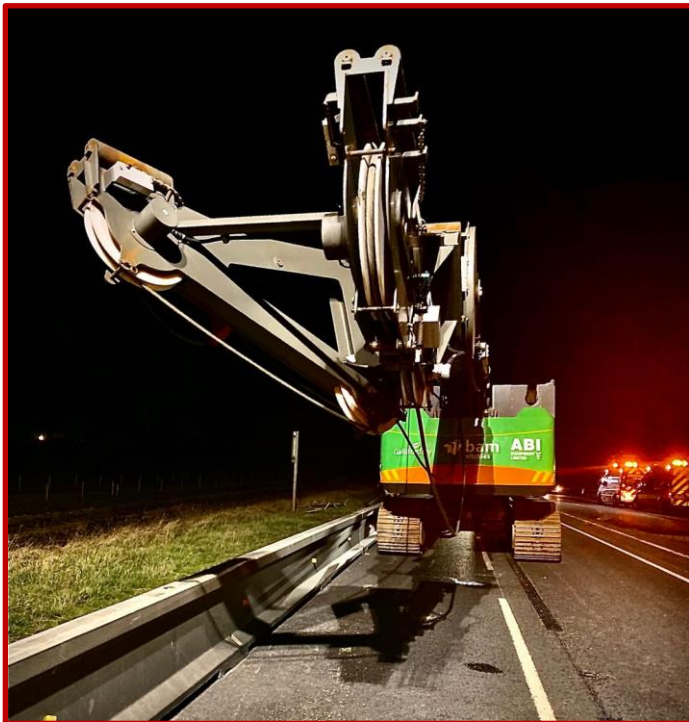
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ABI Equipment Ltd were delighted to supply BAM Ritchies with a Delmag RH28 drilling rig, with associated tooling, for several weeks in early 2020 for works at the Galliford Try Grantham Southern Relief Road site.

This is a major regional infrastructure project, designed to divert heavy traffic away from Grantham town centre by linking the A1 trunk road to the A52 – a major east/west highway traversing the Midlands – in 3 phases.

The aim of this new road network is to reduce congestion, and in doing so minimise disruption and delays, whilst creating a safer, more easily accessible and attractive town centre, as well as provide local opportunities for employment, growth and expansion. It will also work to reduce carbon emissions and noise pollution – both important environmental concerns.



Road Interchange Support Structures, Grantham, Lincs

Client:

BAM Ritchies subcontracted to Galliford Try

Equipment Used:

Delmag RH28

BT280 Rotary Head

+ Kelly Bar



Application:

Contiguous Bored Piles & Rock Socketed Piles



The RH28 rig was required for part of Phase 2 of the project – joining the B1147 to the A1 and creating a major junction interchange. Work on this phase of the relief road project started in the autumn of 2019, and is anticipated to take approx. 2 years to complete.

The new junction required the construction of an underpass to bring the new section of road under the existing dual carriageway. In order to do this BAM Ritchies were contracted for the construction of abutments and wing walls, as

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supporting structures for the bridge and embankments. To enable the A1 to remain fully open during construction, works were scheduled to be completed on the northbound carriageway first, before beginning the southbound carriageway section.

These works require the construction of a maximum of 207no. contiguous bored piles, Ø750mm and up to 12m in length. These are being installed through limestone fill being temporarily cased and then rock socketed into the limestone bedrock. The region is noted for it's very shallow soils, less than 0.5m in many places, so the additional support and protection afforded by the rock sockets is required to stabilise and maintain the structure.

Rock sockets are formed by drilling into the rock layer and creating a shaft space that is slightly larger in diameter than the supporting pile, this void is then filled with a high strength concrete to reinforce the pile. This is an ever more common treatment for increasing the stability and support of piling installed in hard bedrock locations.



Limestone by it's nature is extremely hard and tough, so a powerful rig was needed to execute this. Delmag rigs are renowned for their robust credentials – the RH28 offers 288 kNm of torque and 420kN of delivered crowd force in a rig that retains it's mobility and agility on site – and so was highly suited to this job.

ABI supplied the rig from their hire fleet, part-liveried in the distinctive BAM colours. The bulk of the first stage of these works took place during the height of the Covid-19 outbreak in the UK, so an added complexity was to maintain strict social distancing and sanitising protocols to protect those at work during that time.