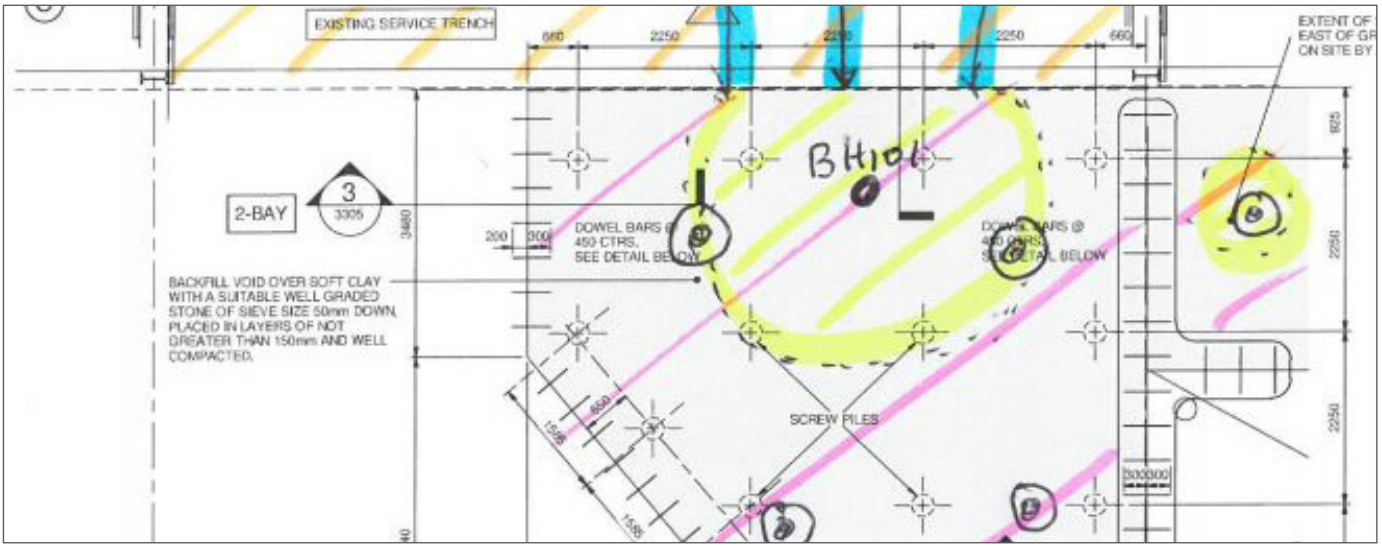
Naval shipyard, void filling and stabilisation



SUMMARY

During the removal of a slab in one of the bays at the NAS facility in Barrow-in-Furness a vpid was identified beneath the existing slab. Geobear was contracted to fill the void, stabilise the ground beneath and relevel the slab - whilst ensuring a load bearing pressure could be applied.

OBJECTIVES

The key objectives for Geobear were to injection expansive resins into the void across the agreed area. This would then be required to allow a bearing pressure of 26kPa on top of the treated area, see maximum settlement of 25mm under 20kPA loading at the top of the slab and be assured for 25 years.

SOLUTION

Our solution involved drilling small 12mm holes at specific points throughout the slab and injecting at depths of up to 7m. We used two different resins in the ground that would expand and fill the void whilst being strong enough to bear the required load pressure.

We performed regular probe tests throughout the process to ensure the treatment was correctly applied throughout the area of the slab.

OUTCOME

Over the course of one week, the Geobear solution achieved all the client requirements. We filled the voids, stabilised the ground to a depth of 6m and relevelled the slab.