An extension to the Seaborne Library at the University of Chester. The new two-storey extension includes internal reconfiguration, refurbishment, minor demolition and diversion/replacement of Mechanical & Electrical services to create new circulation space, communal areas and office accommodation. During the construction works a defective DN150 drain was discovered than runs below the existing building. Diversion of the drain around the perimeter of the building was impractical. Graham approached us to offer advice on a trenchless replacement. Very confined working areas, the ground conditions and existing underground services were considered carefully and resulted in a timber heading solution. We produced the permanent and temporary works designs and following client approval we undertook the construction works. Following the preparation of access roads and hard standings we constructed the 5m deep drive pit. A 15m long timber box heading was constructed from the drive pit, below the occupied building and along the line of the existing drain. The new pipe was laid in the heading that was then backfilled with foamed concrete. An additional 5m long heading was installed to connect to an existing manhole. A new manhole was constructed and followed by backfilling and reinstatement to complete the work.

GROUND CONDITIONS

- MADE clayey overlying stiff CLAY overlying weak SANDSTONE.