

## INTRODUCTION

Utilised where only one side of the structure to be underpinned can be accessed so to minimise disruption to the property. Ground conditions do dictate suitability of system as tensile capacity required in front pile position.

## PILING OPTIONS

Needle / pile positions are no more than 1.45m centres, thus depending upon the weight of the structure, piles will be installed between loads of 50kN and 250kN. Therefore, the following piles would be utilised, dependant upon ground conditions present.

### Driven

100mm Dia. – SWL 50kN

150mm Dia. – SWL 100kN

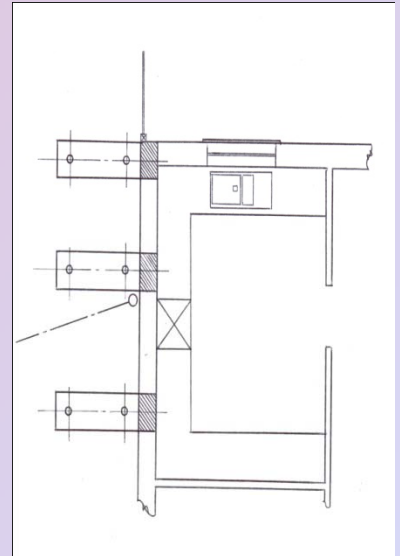
220mm Dia. – SWL 200kN

### Augered

200mm Dia. – SWL 125kN

250mm Dia. – SWL 175kN

300mm Dia. – SWL 250kN



## INSTALLATION

Piles either driven or augered are installed and then connected to the reinforced concrete needle beams, positioned through the walls.

## ADVANTAGES

- I) No disruption to the property
- II) High load capability
- III) Can be constructed at shallow depth below ground level
- IV) Cost efficient compared to dig out systems

