Steel wall protects sensitive land

A steel wall is being inserted 15 metres deep in the ground to prevent sensitive land between the Carillon and Tasman Gardens Apartments from settling when the trench is dug for the National War Memorial Park Underpass. Work began last week for the 90-metre long wall of interlocking steel sheet piles which will help maintain ground water at its normal level.

Testing prior to the Memorial Park Project earthworks revealed that this section of Buckle Street is sensitive to settling from loss of ground water pressure. The solution of a continuous wall of interlocking steel sheet piles will be a permanent fixture helping to protect the integrity of the Mount Cook Police Barracks foundations.

The Alliance is endeavouring to minimise the effects of noise and vibration on people and buildings during the installation which is expected to take about six weeks. Holes have been drilled 12 metres deep to reduce the force required to install the sheets. The task will be made quicker by two cranes working as a team and using an A-frame pile guide. Other areas on the project site are not particularly sensitive to the levels of ground water lowering and are being retained with horizontal timber poles lodged between steel king posts.

On-going work

Passers-by can see the trench for the underpass tunnel and road rapidly taking shape. During April 15-metre steel king posts were installed for the retaining walls. Horizontal timber poles are lodged between the posts as digging proceeds.

The vital work continues of relocating the underground pipes for water, gas, electricity, telecommunications, wastewater and sewage – with minimal disruption of services to households and businesses.

Steel sheet pile wall: the section at left has been partially inserted by a crane using a vibrating hammer; the section at right is held in place by the A-frame guide ready for partial insertion. A second crane will drive the piles down to ground level, also using a vibrating hammer.