



Client: Greg Clarke Building

Location: Fletcher Street, Byron Bay (NSW)

Situation: Provide a cost-effective alternative foundation design for a three level apartment complex

**CASE STUDY No 2:
ALTERNATIVE FOUNDATION DESIGN THREE LEVELS**

Ground

Loose and medium dense sand, overlying a layer of very dense slightly silty sand with some cemented zones, overlying loose and medium dense sand with some sandy clay layers and sandy gravel. Below that is a layer of very stiff clay, over extremely low to very low strength mudstone.

Ground water was found at depths of less than 2 metres.

Solution

A conforming tender for a contiguous pile perimeter wall was priced at \$ 900,000. Instant Screw Piling believed that this solution was in excess of the requirements for a building of the size intended for the site.

A solution comprising a combination of screw piles and a sheet pile perimeter wall sprayed with shotcrete provided a more economical solution that met all engineering requirements. This was costed at \$ 543,000.

At Instant Screw Piling's suggestion, the building was redesigned to incorporate precast panels and post-tensioned slabs, and this resulted in further savings of \$ 600,000.

Instant Screw Piling was able to provide an engineered cost-effective hybrid foundation solution, and its engineering enterprise was able to identify further areas where the client could achieve savings, without compromising the integrity of the building and its foundations.



(left) Proof loading the screw piles to ensure that the design capacity is reached

(above) Sheet piling in place, with shotcreting evident at rear left, screw pile installation in progress

