

# PILING



**GFWA**

SUSTAINABLE TECHNOLOGY

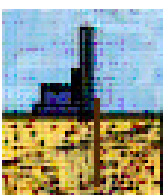


The main purpose of piling is to transfer loads from the structure through soft or loose layers of soil into dense/stiff soil or competent rock at depth. Pile resistance can be provided by end bearing or skin friction.

Secant or contiguous piles may also be used to construct retaining walls. The combination of piles and jet grouting can produce highly impermeable barriers called hard-soft walls.

Piles can be made of concrete and reinforcing bars, steel or even wood. Piling can be carried out by boring or driving. They can be installed onshore, near shore or offshore.

Piles can be designed to resist horizontal and vertical loads and bending moments. Most piles are installed vertically; however they can also be installed at other practical angles to increase axial and reduce horizontal loads in the pile.





Nannup Bridge 4944A

The piles for Nannup Bridge 4944A were constructed using the innovative Super Jaws dual casing drill and drive system. In this piling method the casing is drilled to bedrock using a special drill bit that is driven by a down the hole hammer.

### Some Applications of Piling

- Transfer of loads to competent ground layers
- Contiguous and Secant Pile Walls
- Support of decks and marine structures

### Recent References

Bindaring Parade (WA, Australia)  
Nannup Bridge (WA, Australia)  
Bibbawara Bridge, Carnarvon (WA, Australia)  
St. Mary's Cathedral, Perth (WA, Australia)  
54-58 Mount Bays Road, Perth (WA, Australia)

### GFWA

Web: [www.gfwa.com.au](http://www.gfwa.com.au)

#### PERTH

113 Radium Street  
Welshpool  
WA 6106  
Tel: +61 8 9350 5394  
Fax: +61 8 9358 3095

#### SYDNEY

13-15 Lyonpark Road  
Macquarie Park  
NSW 2113  
Tel: +61 2 9491 7100  
Fax: +61 2 9491 7111

#### BRISBANE

2/3 Harvton Street  
Stafford  
QLD 4053  
Tel: +61 7 3354 9100  
Fax: +61 7 3354 9111

#### MELBOURNE

41 Boundary Road  
North Melbourne  
VIC 3051  
Tel: +61 3 9321 1333  
Fax: +61 3 9326 8996

#### AUCKLAND

PO Box 72734  
Papakura  
Auckland NZ  
Tel: +64 9 236 3385  
Fax: +64 9 236 3385