

CASE STUDY

ACOUSTIC SOLUTIONS FOR SERVICE STATIONS



Background

A Caltex service station in Sydney's west had to construct an acoustic and visual wall to shield adjacent neighbours from the operational noise of a 24-hour Star Mart service station. Owing to an unstable existing retaining wall between the construction site and neighbouring properties, the solution needed to encompass a complex cantilevered post system to transfer wind loading onto stronger areas of soil. An extended design life was also a key requirement.

Solution

The GuardianWall system, utilising galvanised UB support columns, was deemed suitable for this project. A unique GuardianWall solution was quickly designed and fabricated by ModularWalls to ensure the residents were not exposed to construction noise. The requirement for the top of the wall to meet specific height Reference Levels imposed by Fairfield City Council resulted in significant challenges when completing the footing foundations.

However, persistence and ingenuity resulted in a fully compliant project. The final GuardianWall design was 1.5m - 3.0m high and 76.4m long, comprising of 29 individual cantilevered posts and AcoustiMax75 panels which exceeded the required 20+RW (Weighted Sound Reduction Index) acoustic, subtle values. A final coat of paint resulted in a highly professional and subtle practical noise barrier with 40+ year design life.

Industry leader in innovative and cost effective acoustic and boundary walls

- **Proven acoustic performance**
- **Cost effective**
- **Durable, lightweight modular construction**
- **Quick and easy installation**
- **Suited to environmentally harsh and remote locations**

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