

# DAINFERN SQUARE

Dainfern, Johannesburg, Gauteng, South Africa  
(Working in a sensitive noise zone)

**PROJECT TYPE: Main civils for a suburban mall**

**CLIENT:**  
Abacus Asset Management

**DATE OF PROJECT:**  
September 2013

**PROJECT DESCRIPTION:**

Dainfern Mall is adjacent to an upmarket housing complex. Due to the tight schedule of this project, operations have had to occur after hours and over weekends. Several complaints were received regarding noise levels during the evenings, specifically when concrete was being poured and need to be floated. A concrete floater is generally quite a noisy piece of machinery, with a 2 stroke petrol engine. Where large decks are poured, several concrete floaters may be needed at the same time. The team at Dainfern investigated sourcing electrical concrete power-floats on the market, but found that these would have to be imported at huge cost. An idea was therefore formulated to convert some of the petrol engine concrete power floaters to electrical power.

A unit was re-engineered, from a petrol driven motor to an electrical driven motor. This required an understanding of what electrical motor would have adequate enough power to float properly and to sync this motor to the floaters gearbox. After successful testing, several floaters were then converted. This dropped the noise levels significantly, allowing floating to continue through the night shift. It also eliminated the need for the motors to be refilled with fuel, reducing spillage and the use of petrol. The action reduced the noise from machinery during the floating operations at night, as there was no petrol motor to make noise. Production could continue, through all shifts, especially when noise was an issue.

