



The main grandstand structure at Newcastle's nearly completed EnergyAustralia stadium will be supported primarily on 900mm diameter contiguous flight concrete piles.

Knights' new home has concrete beginnings

The third Friday in April saw the Newcastle Knights play their first home game of the 2004 National Rugby League season at the almost completed EnergyAustralia Stadium.

Haslin Construction is responsible for the grandstand's civil contract, and the construction of the eastern stand is being carried out in two stages. The first saw the addition of around 5,000 concourse seats in time for the Knights game. Following this, the superstructure will be built during the

remainder of 2004 with completion slated for the end of the year.

The main grandstand structure will be supported primarily on 900mm diameter contiguous flight concrete piles, constructed by Frankipile Australia, with the heavier working loads to 3,350kN maximum socketed nominally within the bedrock.

Subsurface conditions within the vicinity of the new grandstand area generally comprised 7m of fill that included slag boulders forming the existing hill. Below this, dense sands up to

4m thick were underlain by clay, with bedrock varying in depth from 25 to 28m.

The piles have been designed for vertical, horizontal and moment loading, together with the requirement that a section of them be free standing due to the limited lateral soil restraint provided by the hill formation.

The possibility of another earthquake in the Newcastle region, on par with the 1989 quake, was also taken into consideration in the design of the piles, in accordance with Code requirements.

Frankipile Australia also installed sheet piles for support for ramps and proposed excavations associated with the construction of the new facilities. Some of the sheet pile will be shotcreted and remain permanently exposed, with the undulating profile of the sheet pile being incorporated as a design feature of the wall.

In addition to the new grandstand, permanent bucket seating has been installed on the northern and southern concourses, while remedial work will be undertaken on the western grandstand.

Once completed, the upper deck, corporate level and concourse will seat approximately 12,500 football fans, with more than half of these seated undercover. **BA** **READER RESPONSE**

Sit up and take notice

Using a floor grinder while kneeling is slow and exhaustive work and the prolonged pressure is hazardous to knees, backs, arms and wrists, thereby impacting on occupational health and safety.

A new compact floor grinder/leveller from Floorex is designed for safer use, representing a significant improvement on the traditional design that saw users hunched over for extended periods of time.

Called Situp N Grind, the package includes a 9in angle grinder, diamond disc with a dustless hood, balancing weights, a set of elevated handles attached to the grinder and a comfortable stool with swivel castors. A removable section on the hood and a folding

handle enables it to get close to walls and into corners.

The inclusion of a stool has two benefits to the user. Firstly, it eliminates the problems associated with kneeling and crouching on hard concrete that plague traditional hand grinders.

Secondly, it places more distance between the user's face and the rotating disc, thereby reducing dust inhalation and eye irritation. Also, being on wheels, the user can easily scoot around the working area to move to the next location.

The system uses dry operation with an attached vacuum, so there is little mess and clean up simply involves a quick vacuum of the immediate area. The dustless hood allows the



grinder easy mobility across the floor yet seals the rim to prevent dust and debris from escaping.

Like standard grinders, the Situp N Grind can be used to remove tripping hazards to concrete slabs, making the floors smoother and quieter for forklifts, as well as taking away old line markings.

The Situp N Grind was designed and manufactured in Australia, and is suitable for contractors, industry and DIY use. **BA**

READER RESPONSE