

DELIVERING SPEED WITHOUT COMPROMISING QUALITY

Danley upholds quality and service standards for The Ashcourt Group

The Ashcourt Group, a leading supplier of building materials in the Hull and East Riding area, needed to deliver a 6300 sqm concrete hardstanding for a new warehouse in a tight time frame, but without compromising quality.

Speed was crucial for this construction project so that production schedules were not delayed for the warehouse owner. Although this was a time-critical project, there was to be no compromising on quality – a challenge that sub-contractor Harland's Builders faced head-on.



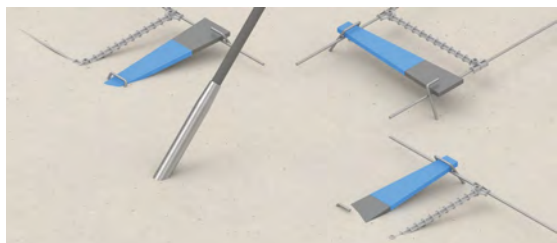
Craig Harland, from Harland's Builders, explained:

"This substantial warehouse build needed to be completed quickly, with time on site kept to a minimum. But despite the time crunch, the product needed to be a performance-engineered concrete hardstanding that would stand the test of time."

"Once up and running, facilities like this need a floor that offers optimal load transfer with minimal common failures so that future maintenance is minimal."

Instead of using traditional mesh reinforcement for the concrete warehouse floor, Harland's Builders recommended Danley's Strategic Reinforcement Design™ for a faster installation and a flooring system that could better manage the natural behaviour of the concrete and reduce common failures.

Knowing that most deterioration of concrete slabs happens at the joints, The Ashcourt Group explained to its customer that by removing the steel from the mid-panel, and placing the support at the joints instead, they could optimise load transfer and control cracks in a way that would considerably reduce service maintenance and improve the structural integrity of the slabs.



The PD3™ Dowel Cradle provides the highest deflection control tolerance in line with ACI Standards recommendations to limit joint spalling, facilitate load transfer and provide the lowest risk of restraint to ensure the best serviceability outcome for the slab design.

The use of the PD3™ Dowel Cradle System extends the life-cycle of the floor to provide the highest level of floor efficiency for tenants and the highest return on investment for the asset owner.

The slab was constructed and delivered within the tight deadline to aid the fast build of this warehouse. In addition to the speed and performance benefits, Harland's delivered The Ashcourt Group a cost and energy savings too, by using less material compared to traditional hardstanding methods.

There was a 13% reduction in concrete and an impressive 74% reduction in the amount of steel used, resulting in a cost saving of 27% and a 27% saving in Co2e/m2.

The Strategic Reinforcement™ Design complies with Concrete Society TR66 Rev 1: External in-situ Concrete Paving, ACI 330.2R-17: Guide for the Design and Construction of Concrete Site Paving for Industrial and Trucking Facilities and ACI 360-R-10: Guide to Design of Slabs-on-Ground.

Strategic Reinforcement™ Design Danley® PD3® Dowel Cradles Danley® Dowels

Project information

- Client: Ashcourt Properties
- Project: Kellythorpe
- Location: Driffield
- Concrete Hardstanding Area: 6300m²
- Main Contractor: The Ashcourt Group
- Design Slab Engineer: Adept Consulting Engineers
- Concrete Contractor: Harlands Builders
- Completion Date: October 2022

Danley's Services

- Technical design support to the engineer
- On-site installation training and guidance on best practices for quality assurance
- Danley® design warranty

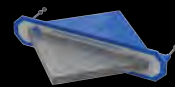


Danley® Strategic Reinforcement™ Design

- 175mm thick PAV2 C32/40 Concrete Slab
- No steel reinforcing mesh
- PD3® Dowel Cradles at contraction joints
- Danley® Dowels at construction joints
- Joints spaced at 3.5m x 4.5m



PD3® Dowel Cradle



Danley® Dowel

Original Design:

- 200mm C35A Concrete Slab
- Single layer of A393 mesh
- H12 900mm dowelled construction joints
- Joints spaced 9m x 7m