

## Travis Perkins selects Strategic Reinforcement™ Design for external service yard

When it came to constructing the brand new premises for nationwide builders' merchant, Travis Perkins, an innovative solution was required for the creation of an external concrete hardstanding. Danley's Strategic Reinforcement™ Design solution offered a long-lasting solution that could withstand heavy loads without cracking, while offer cost savings and increasing the sustainability credentials of the project.

A key part of the new site, the service yard will be used for the storage of heavy goods – from timber through to stone. In addition to the materials themselves, delivery vehicles will use the area on a regular basis, with members of staff and customers also accessing the space. As such, the exterior slab needed to be durable, ensuring it can comfortably handle the loads placed on it while providing a safe space for workers and visitors.



To achieve the desired strength and finish, concrete would be the material of choice. However, to ensure its longevity and reduce the potential of cracking due to loads and regular movement, an alternative solution to traditional reinforced concrete was required. While concrete itself is a very durable material which is capable of handling heavy loads, traditional methods of reinforcement can actually make it more prone to cracking, accelerating deterioration and decreasing the lifespan of external slabs

### Durability and performance

To overcome these challenges, Travis Perkins selected the Danley Strategic Reinforcement™ Design solution to create its 6,640m<sup>2</sup> concrete hardstanding.

Negating the requirement for steel reinforcing mesh, the 175mm thick concrete slab instead uses a series of PD3 Dowel Cradles and Danley Dowels placed strategically across the area. In practice, this tapered dowel system enhances load transfer efficiency by providing the strength required to withstand heavy loads, while benefiting from the flexibility which helps to reduce internal stresses. This is made possible through the creation of a small void, which is formed within the concrete by each dowel to minimise restraint induced stresses.

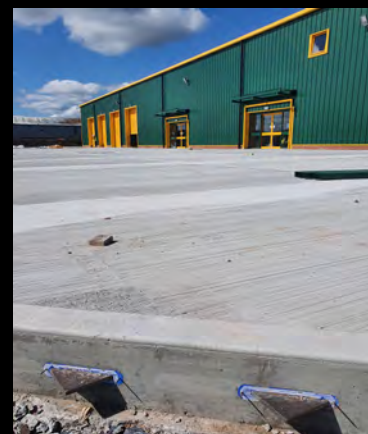
Using this method to create a high-performance external slab for the new Travis Perkins site gives the business the foundation it needs to bring high-quality materials to local customers.

### Project information

- Client: Travis Perkins
- Project: Vesuvius Phase 3, Worksop
- Location: Vesuvius Way, Worksop
- Concrete Hardstanding Area: 6640m<sup>2</sup>
- Main Contractor: Harris CM
- Project and Design Slab Engineer: Adept Consulting Engineers Ltd
- Concrete Contractor: Greystone Construction Ltd
- Completion Date: 2022

### Danley's Services

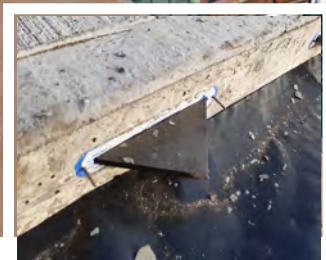
- Technical design support to the engineer
- On-site installation training and guidance on best practices for quality assurance
- Danley® design warranty



### 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 4.2mx4.2m





(1) Danley PD3 Cradle™ (2) Danley™ Dowels

### Shared benefits

The advantages of Strategic Reinforcement™ Design doesn't end there. From faster set-up time and reduced labour requirements during installation through to providing efficient load transfer and improved floor performance, the innovative solution transforms the construction process and extends the service life of the finished product.

For contractors, that means they can meet client expectations by delivering a cost-effective, durable and maintenance-free concrete hardstanding. Faster installation times and the need for fewer materials also means less deliveries to site, further elevating the sustainability credentials of projects. While for asset owners and clients such as Travis Perkins, the solution reduces long-term maintenance costs and significantly reduces the potential for cracking, seeing them benefit from a superior concrete floor which meets their requirements and even improves health and safety.

Clive Owen of Greystone Construction Ltd, the contractor responsible for installing the Danley solution, said: "We found that Danley's Strategic Reinforcement™ Design solution was simple to use and fast to install. We were able to meet our clients demands by offering a cost savings solution."

With faster, more sustainable and more reliable solutions being required in construction today, Danley's solution is playing a key role in creating hardstandings which deliver on user needs.

To find out more about Danley's Strategic Reinforcement solution, visit: <https://danley.co.uk/strategic-reinforcement/>