

RE-SUPPORT, RELEVEL AND STABILISE PAVEMENTS FOR MANUFACTURING PLANT

Site Profile

Ullrich Aluminium is a leading aluminium manufacturing plant located in Kurri Kurri, New South Wales.

Their concrete delivery and departure pavements see heavy traffic on a daily basis of large trucks and machinery.



The Situation

Due to years of high traffic volume of heavy trucks and machinery the pavements had become compromised due to water ingress as a result of the sealing failing over the years.

Once water gets underneath a pavement and traffic travels across it, this causes a pumping action which results in the surface beneath the concrete to be displaced, causing the pavement to move, crack and sink. The cracking of the pavements on site were significant and causing a hazard to both personnel and machinery on site.



An urgent solution was required to relevel the pavements and increase their load bearing capacity.

Our Solution

Ullrich Aluminium engaged Resinject to propose a suitable solution to raise and re-level the effected pavements, that would still allow the factory to operate without disruption. Subsequently, Resinject's experienced consultants promptly attended the site and assessed the pavement issues.

It was discovered that the pavements had been compromised due to water ingress resulting in the loss of load bearing pressure and the pavements becoming unstable, unlevel and cracked in many places across the delivery and departure areas.

Our principal aim was to void fill, re-support and relevel as well as increase the load bearing capacity of the pavements to ensure the safety and wellbeing of all staff, machinery and equipment on site.

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To raise and re-level the pavements, Resinject proposed a slab-jacking solution consisting of a 1.2m x 1.2m grid of injection points across the affected area.

Following this, a series of stabilising piers were proposed to a depth of 1.5m centres around the perimeter of the slab to counteract any future subsidence by improving the load bearing capacity of the ground ensuring longevity of the re-leveling works.

Finally, in critical high traffic, high load areas, Resinject proposed a tiered 'pier pad' solution with deep injections at 1.0m, 1.5m, and 2.0m, underneath the concrete pavement.

Ullrich Aluminium agreed to the proposed solution and Resinject's services were booked in for shortly thereafter.

The Results

After completing a company induction for all Resinject personnel followed by an internal Resinject Site Specific Safety Meeting, we were

satisfied that all safety aspects of the project had been covered.

Isolation and restriction signage of work areas inclusive of traffic controls were implemented to allow for repair work to proceed and the factory to operate without disruption.

Relevelling and support of the pavements by product injection brought them back into their original state, thereby extending the life of the machinery and minimising risk of injury to personnel.

The load bearing capacity of the pavements was significantly increased to ensure that they will remain in prime shape for years to come.

Work was completed on time and on budget and Ullrich Aluminium can continue to claim their position as a leading aluminium supplier for industrial, architectural, manufacturing and fabrication projects across Australia.

Acknowledgements

Resinject would like to thank Ullrich Aluminium for the opportunity to demonstrate our sustainable, and cost and time effective solutions.

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