



Slab lifting and grouting

Realigning and extending the life of concrete slabs



The lifespan of a concrete pavement can be extended through timely maintenance and repairs including realignment of subsided sections. The crucial aspects of this work are the controlled and accurate lifting of the subsided sections and the ability to fully grout ensuing voids.

The problem

A lack of routine maintenance can cause voids to form beneath the pavement. The slab then settles into the void creating an uneven surface for road users.

This uneven surface can have potentially fatal consequences for cyclists and result in the break up of the pavement. Replacing a pavement that has broken up is costly and highly disruptive.

The solution

Our solution is to mechanically raise the carriageway to the required level and fill the voids using vacuum assisted techniques and fast curing grout.

High pressure injection alone can result in uncontrolled lifting and the need to suspend grouting before all of the voids are filled.

How does it work?

1. Assessment of number and placement of frames required for the lift
2. A series of sockets for the lift are resin anchored into the carriageway and holes are drilled for subsequent grouting
3. Frames are attached to sockets and balanced hydraulic jacks used to lift the slab. Once the slab is locked in position grout injection begins.



Stage 1 - Assessment, planning and agreement of works



Stage 2 - Resin anchored sockets are installed and holes are drilled for grouting



Stage 3 - The carriageway is lifted and grouting commences

Balanced hydraulic jacks are used to lift purpose built frames that have been resin anchored to the concrete.

The ensuing void is then grouted, usually with vacuum assistance, to create a stable carriageway.

A time proven process

Developed by Balvac, this method of slablifting was first used in 1980 to lift part of the M4 exit slip near Heathrow Airport by 38mm.

The largest lift undertaken to date is 151mm on the M1 southbound near Gateway Services.

In-house delivery

Our experienced engineers work with our customers to agree the scope of works and produce a detailed technical proposal that includes the price. The works are then delivered safely by our in-house team who bring best practice and experience to every project.

Applications

- Realignment of concrete slabs in any ground bearing location including roads, airports, seaports and industrial warehouses.
- Tilting or full lifting of individual slabs or of whole lanes of pavement up to 5.5m wide.

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