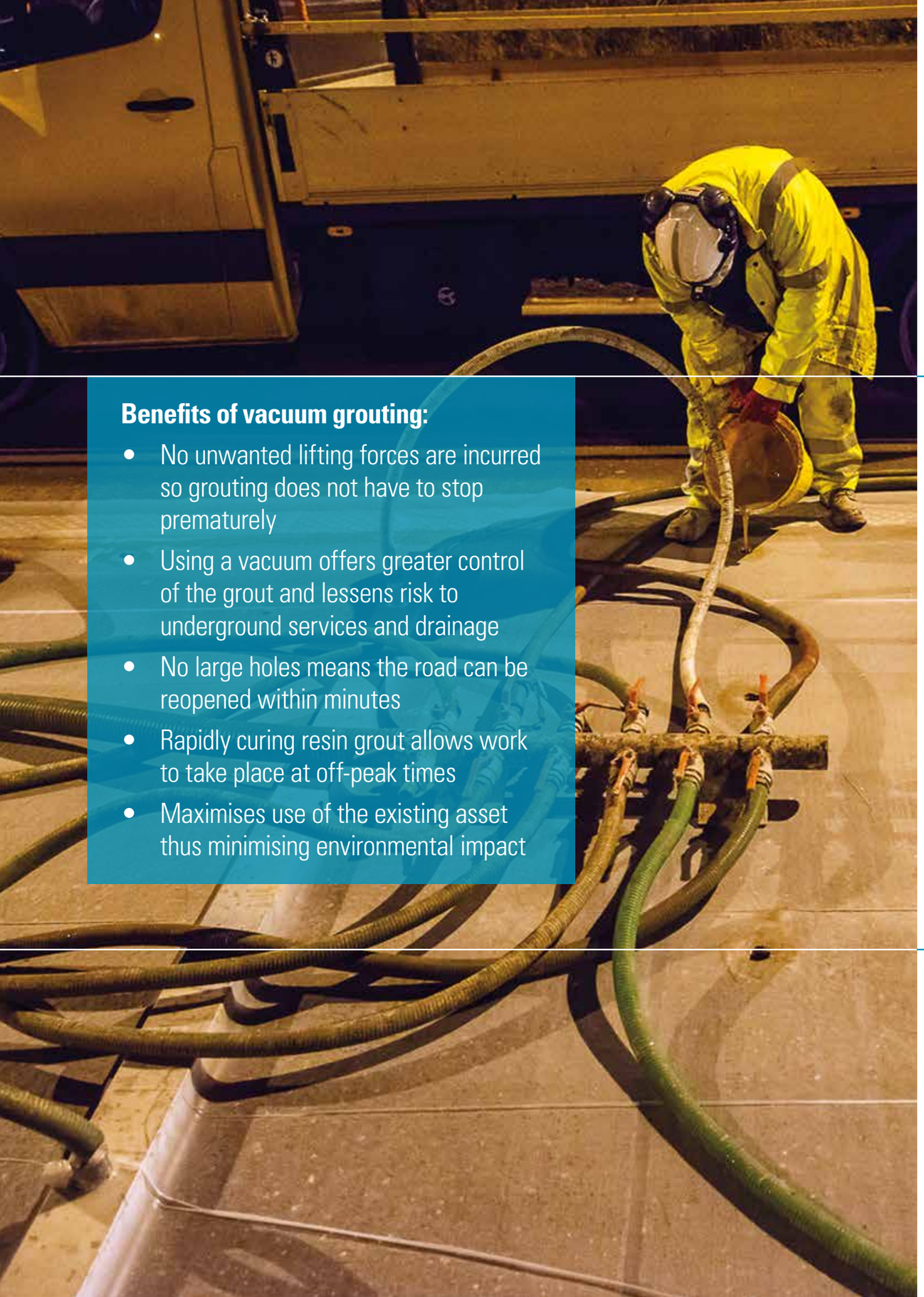
Vacuum void grouting

Stabilising and extending the life of concrete slabs

Balvac
Balfour Beatty



Benefits of vacuum grouting:

- No unwanted lifting forces are incurred so grouting does not have to stop prematurely
- Using a vacuum offers greater control of the grout and lessens risk to underground services and drainage
- No large holes means the road can be reopened within minutes
- Rapidly curing resin grout allows work to take place at off-peak times
- Maximises use of the existing asset thus minimising environmental impact

Concrete pavements, with or without a flexible overlay, are an important part of the UK road network. Voids can occur underneath these slabs that require specialist maintenance to enhance the life and integrity of the pavement and minimise the cost and disruption of replacing the carriageway.

The problem

Even minor voiding beneath the concrete leads to 'rocking slabs' and results in:

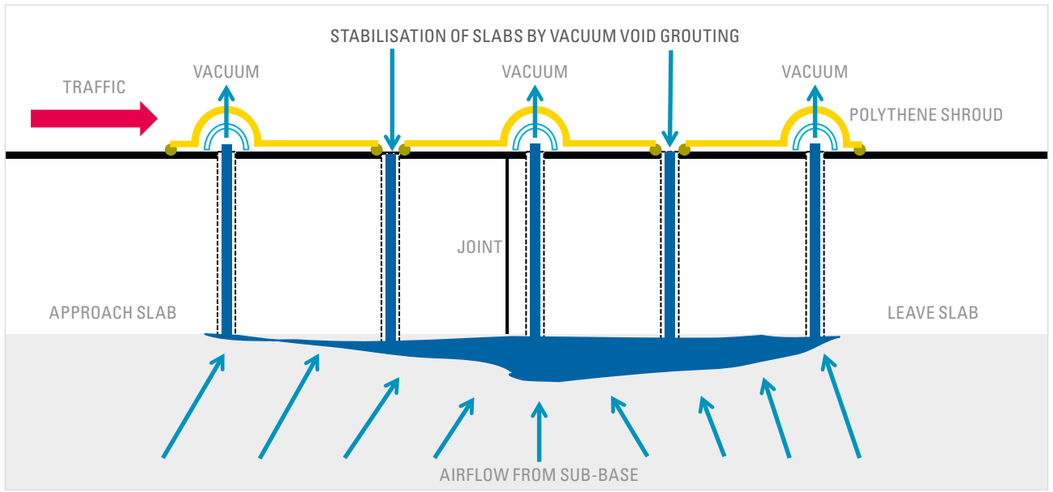
- Reflective cracking through any overlay
- De-bonding of joint sealant
- Break-up of thin bond repairs
- Eventual cracking and breakup of slabs

The solution

Our vacuum void grouting process is a cost effective way to rehabilitate the pavement with minimal impact on network availability.

How does it work?

See diagram below. Application of the vacuum creates an airflow pattern, drawing air from the sub-base and down the feeder holes. Replacing the air inflow with grout results in the complete filling of the void.



A time proven process

Vacuum void grouting was developed in conjunction with the Department for Transport and the Transport Road Research Laboratory in the late 1970s. It is recognised and accepted as a maintenance and repair process and is the subject of advice notes HA6/80 and HD32/94.

In-house delivery

Our engineers will visit the site and agree the scope of works and any testing regimes required. Following this visit, a full technical proposal and offer is produced for approval by our customer.

Following approval, the works are delivered by our own in-house skilled and experienced workforce. Using experience from previous contracts they will ensure all health and safety management is in place, the agreed levels of quality are met and best possible customer service delivered.

Applications

- Virtually all concrete motorways in the UK, numerous major A roads and local authority roads.
- Concrete pavements at airports, seaports and industrial warehouses (both internally and externally).

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