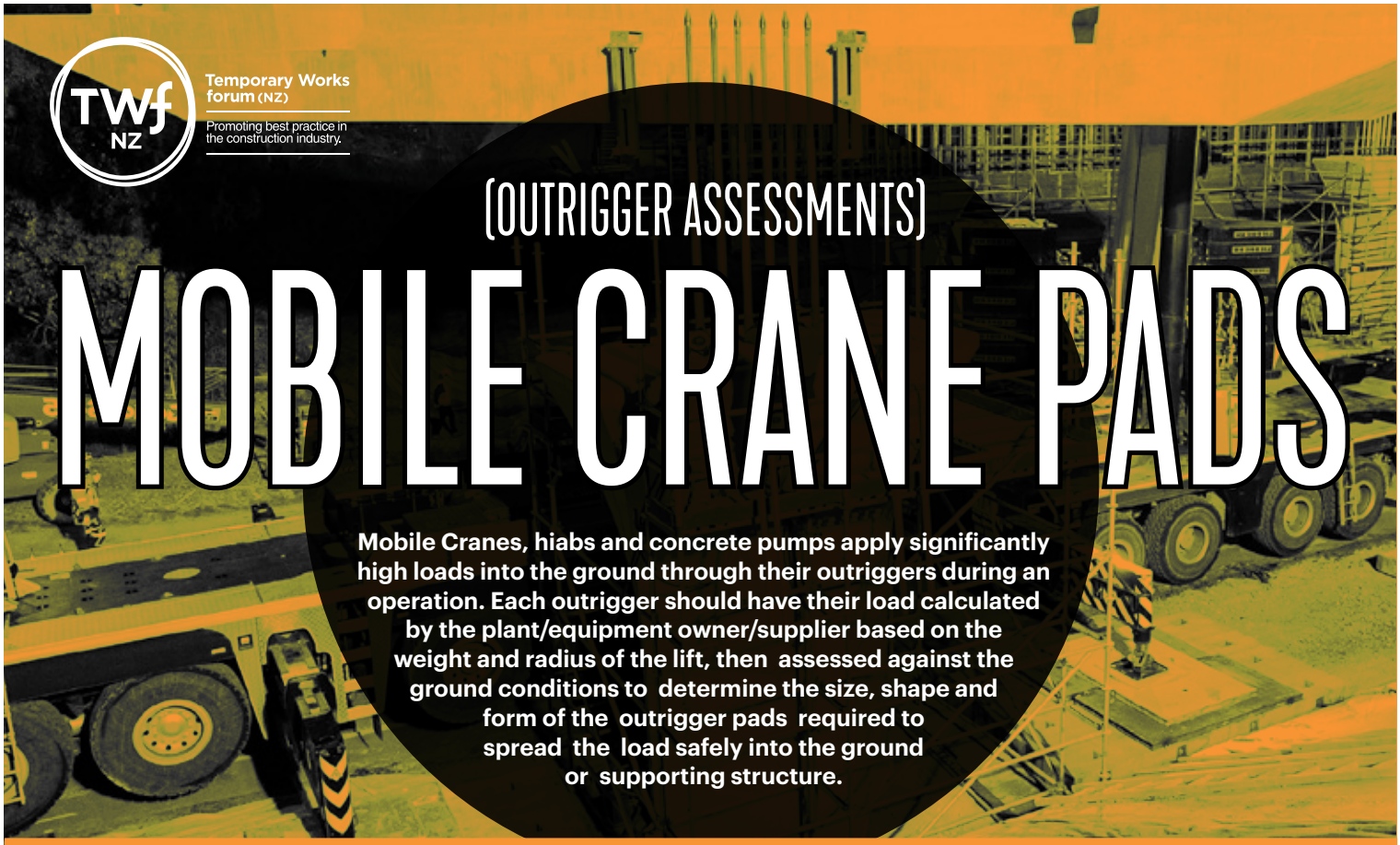
Temporary Works forum (NZ)
Promoting best practice in the construction industry.

(OUTRIGGER ASSESSMENTS)

MOBILE CRANE PADS



Mobile Cranes, hiabs and concrete pumps apply significantly high loads into the ground through their outriggers during an operation. Each outrigger should have their load calculated by the plant/equipment owner/supplier based on the weight and radius of the lift, then assessed against the ground conditions to determine the size, shape and form of the outrigger pads required to spread the load safely into the ground or supporting structure.

What to look out for:

- **Where weak ground is evident – soft clay/silts, loose sands, a high water table, reclaimed ground of unknown compaction, or composed of organic soils.**
- **Where the pad is not central to the outrigger.**
- **Where the ground is not flat or the pad is not seated fully on the ground.**
- **Where the outrigger pads are damaged or in poor condition.**
- **Where a late change to the type or use of crane will affect the outrigger loadings.**
- **Where the outrigger pad edge is <2H from the base of the berm.**
- **Where the location and depth of services/manholes have not been verified and marked.**
- **Where backpropping of suspended slabs have not been verified through robust survey against set out of the crane outriggers.**
- **Where the crane is not levelled and/or outriggers are not fully extended.**

What is the risk?

Ground failure could lead to rotation of the mobile crane and collapse of the crane onto the workplace.

Why could that happen?

The outrigger pads have not been assessed by a competent person or used in accordance with the details of that assessment.

How do I know it is safe?

All crane setups and outriggers will need to be assessed by a competent person and used in accordance with a controlled specification and/or drawing.

Outrigger assessments should be supported by a Design Check Certificate either for a bespoke lift or for a series of lifts controlled by the same Contractor.

Where can I find good guidance?

- Crane Stability on Site: an introductory guide (CIRIA C703)
- Approved Code of Practice for Cranes (DoL/WorkSafe NZ)

Who do I speak to if I have any concerns?

You must raise your query with the Temporary Works Co-ordinator for the Project.

If this person is not immediately available please discuss your concerns with the Site Manager or plant/equipment operator

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