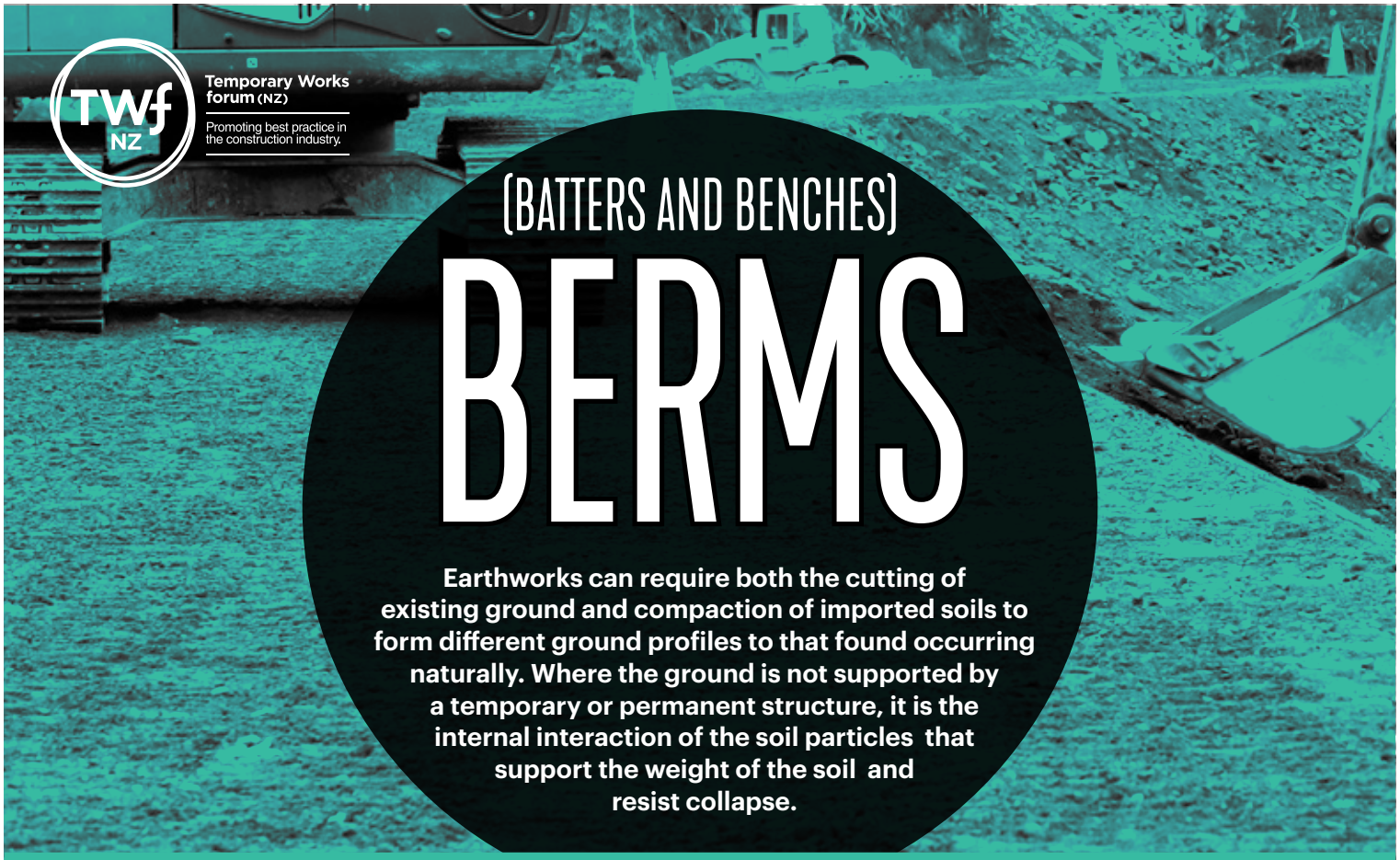

Temporary Works forum (NZ)
Promoting best practice in the construction industry.

(BATTERS AND BENCHES)

BERMS

Earthworks can require both the cutting of existing ground and compaction of imported soils to form different ground profiles to that found occurring naturally. Where the ground is not supported by a temporary or permanent structure, it is the internal interaction of the soil particles that support the weight of the soil and resist collapse.

What to look out for:

- **Where berms are cut steeper than 1.5H to 1V.**
- **Where plant or surcharges are <2H from the base of the berm.**
- **Where groundwater is seeping through the sideof the berm.**
- **Where cracking at the top or across the face the berm is visible.**
- **Where expected ground conditions are different to reality.**
- **Where the berm face is exposed to weathering.**

What is the risk?

Soil may be cut to a profile that is either unstable under its own weight, when surcharged by spoil, or plant loading and lead to collapse of the berm and potentially any other structure supported by it.

Why could that happen?

Where an earthworks methodology has not been adequately considered, berms can be constructed without a full understanding of either the risks posed by the berm or the soil conditions that support it. Earthworks can be time consuming, congest the site and add significant cost if not adequately considered by the Contractor.

How do I know it is safe?

All berms need to be assessed by a competent person and used in accordance with a controlled specification, drawing or methodology. Where a suitably competent person can not be found on site, the berm should be supported by an engineering assessment and Design Check Certificate.

Where can I find good guidance?

- Excavation Safety: Good Practice Guideline (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.

temporary.works@engineeringnz.org