



Temporary Works  
forum

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## TWf INFORMATION SHEET No. 17 Lateral stability: Top restrained falsework (or not)?

Consideration of the lateral stability of falsework is important.

In the design of falsework, there is a difference between falsework which is **top-restrained** and falsework which is **freestanding**.

Top-restrained falsework does not provide its own lateral stability but relies on **external** support. This support is normally provided by the adjacent permanent works.

In the construction of a flat concrete slab, the soffit formwork fits tightly around the permanent columns, walls and building cores and the falsework often relies on this to prevent itself falling over.

Many of the common falsework systems (in particular, 'prop and panel' and 'partially braced towers') are normally designed as top-restrained. To provide stability, the permanent works needs to be able to accommodate this force. In particular, new concrete structures should have gained sufficient strength before being used. Removal of the top-restraint can reduce the falsework capacity significantly and may precipitate an immediate collapse.

Temporary works should be designed and checked.

The temporary works designer (TWD) should provide any required stability reactions in their design output. The permanent works designer (PWD) should then confirm that the permanent works can safely resist them.

Communication and coordination between the parties can be an issue and the responsibility for ensuring that it is adequately completed lies with the Temporary Works Coordinator (TWC). The TWC should ensure that the falsework is installed in accordance with the approved construction drawings.

Temporary works designers commonly assume that all permanent works can resist the stability forces. If they cannot, it is good practice for the permanent works designer to record this as a residual risk.



### In summary:

- Read the manufacturer's information.
- Determine whether any falsework proposed is top-restrained or not.
- TWD: Provide any required stability reactions in their design output.
- PWD: Confirm that the permanent works can safely resist the imposed force.
- TWC: Ensure that the falsework is installed in accordance with the approved construction drawings.

### Reference:

Temporary Works Toolkit. Part 17: Falsework for the support of in situ concrete to horizontal surfaces, Andrew Jones, The Structural Engineer, November/December 2017

[https://www.istructe.org/journal/volumes/volume-95-\(2017\)/issue-11-12/temporary-works-toolkit-part-17-falsework-for-the/](https://www.istructe.org/journal/volumes/volume-95-(2017)/issue-11-12/temporary-works-toolkit-part-17-falsework-for-the/)

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