

Temporary Works Procedural Control Examples of Construction Work Complying with the GPG

Example 1: A Sheetpiled Excavation Constructed by a Small-Medium Sized Contractor

Description

A deep manhole is to be installed and the Contractor is planning to use sheetpiles to shore the excavation.

The Contractor

The Company is small, but is experienced in driving sheetpiles and installing manholes.

Key staff include:

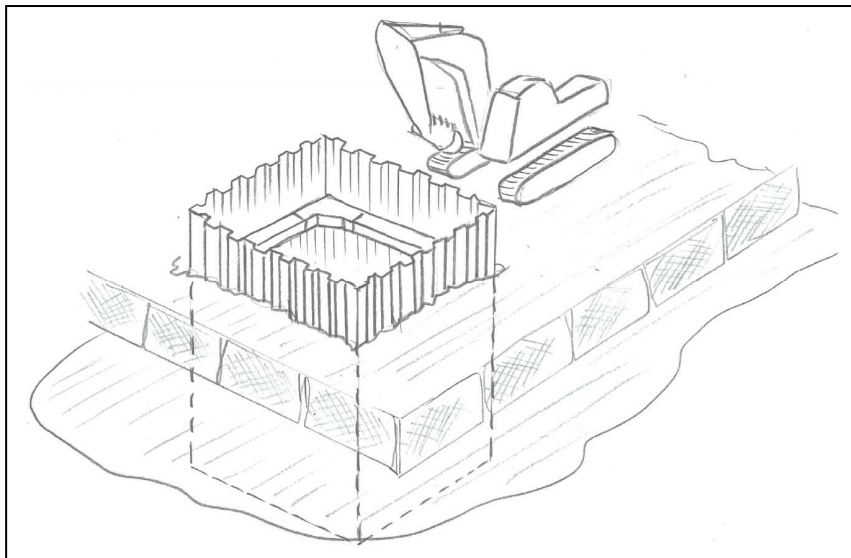
- a) the Director/Owner
(an engineer who is a CPEng)
- b) the Site Engineer
(who has a BE + 3 years' experience)
- c) the Supervisor
(who has 30 years' experience)
- d) other site crew
(Operators, welders, drain layers)

Roles and Designations

The Director has adopted the TW forum GPG as the procedure for all Temporary Works.

The Director is the "Designated Individual" (DI) as defined in the TW forum GPG.

The Director has briefed the key staff on how to follow the GPG, explaining the importance of good process. The site engineer has been appointed as the TWC and the Supervisor as TWS and this was formalised using the Appointment Letters in Appendix B of the GPG. The Director considers that training staff to be TWC's and TWS's involves coaching and mentoring. For this reason, on-the-job training, evaluations and site visits are regularly carried out and recorded.



Planning Stage

The Director has given this job to the Site Engineer (TWC) and Supervisor (TWS) to work together on.

1. The TWC identifies the Sheetpiling as Temporary Works so enters it on a **TW Register** similar to Appendix C in the GPG.
2. By comparing the task with Appendix E in the GPG, the TWC assesses it as **Category 1**.
3. The TWC prepares a Design Brief similar to Part 1 in the GPG.
4. The Director who normally designs temporary works is too busy and instructs the TWC to outsource the design to a Consulting Engineer who is a CPEng. The Consulting Engineer determines the sheetpile lengths and waler details and summarizes this in a sketch. A Design Certificate is also issued, equivalent to Part 2 in the GPG.
5. The TWC dialogues with the Designer and the TWS (and the Director) during the design stage to ensure that hazards are reduced as far as reasonably possible and that an optimum solution is found.
6. The Director reviews the Consulting Engineer's design and signs a Check Certificate (Part 3).
7. The TWC confirms that all documents are complete: IFC sketches, signed design and check certificates and clear requirements for inspections and "HOLD POINTS". The TWC updates the **TW Register**.

Execution Stage

1. The TWC briefs the TWS on site before work starts so that there is a clear understanding of the design and the need for inspections and "HOLD POINTS".
2. The sheetpiles are installed and the waler is fitted. In accordance with the Certificates and IFC sketches, excavation must not proceed deeper than 2m before the waler is inspected and a PTL is issued.
3. The TWC inspects the waler with the Consulting Engineer also in attendance. The Consulting Engineer issues a notice that he is satisfied with the waler. The TWC issues a PTL and updates the **TW Register**.
4. Work proceeds under the supervision of the TWS.
5. Once a week, either the TWC or the TWS (or both) inspect the sheetpiling and walers and no signs of movement or deflection are found. The **TW Register** is updated after each inspection.
6. According to the design sketch, the waler can be removed when the excavation has been backfilled to 2m below ground. When this occurs, the TWC issues a PTU and the waler is removed.

Abbreviations

GPG - Temporary Works Procedural Control Good Practice Guideline published by the Temporary Works forum New Zealand	TWC - Temporary Works Coordinator	TWS - Temporary Works Supervisor
DI - Designated Individual	PTL - Permit to Load	PTU - Permit to Unload
IFC - Issued For Construction	TW - Temporary Works	
CPEng - Chartered Professional Engineer		