

# Safeguarding Temporary Works During Suspension of Site Activity

Customer  
Support

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## Introduction

This document is intended to be referred to when activities on site are unforeseeably suspended.

The content within this document is an overview of safety actions and recommendations that must be considered and not to be relied upon for specific scheme and / or site requirements. For example, most temporary groundworks are designed on an assumption of lasting less than 12 weeks. However, this duration may be exceeded if site activities are suspended without prior planning. Below are some key considerations that must be taken into account for Groundworks, Bridging and Propping and Jacking products.

## Changing Conditions

Conditions will change over time and can get worse. If the project was originally designed to account for short-term conditions, meaning a duration of 12 weeks or less, the design will need to be reassessed to ensure that it is stable in the long term.

For example, very impermeable clays **may** maintain a stable condition for much longer than this (some clays can remain in their undrained state for 20 years!) while other clays may weaken and reach their drained state in **less than a week!**

In some cases, it may be necessary to increase the strength of supporting structures to account for a potential increase in earth pressure or the increased utilisation of a bridge, for example.

## Increased timespan means increased probability of being affected by extreme events

A short-term design may account for a small amount of water due to storm events or other accidental conditions, such as wind damage. However, if the temporary works last for an extended period of time, the chances of more severe weather events and other accidental conditions increases significantly.



Ensure that there is sufficient robustness in the temporary works solution to account for potentially greater loads from wind, rain, fatigue etc.

Considerations include, but are not limited to, the following:

- Will timber last for the entire period?
- Will ground anchors remain stressed after a significant number of wet/dry cycles in the soil?
- Will falsework or other supporting structures adequately cope with a greater number of load cycles from wind and temperature changes?
- Will equipment become overstressed if more load is accidentally applied?

## Increased risk of security breaches

While a site is unoccupied, it is at the highest risk of trespassing. While conditions on site may be safe for an experienced temporary works operative, the site may pose a danger to others who may wander onto site. Ensure that clear signage is present that fully explains any dangers of the site.

## A few tell-tale signs

### Groundworks Specific

- Tension cracks – usually occurring in clay conditions, as the ground changes over time, tension cracks can form. This may lead to loose material falling away from cut edges, but can also provide a path of water ingress that may significantly increase the pressure that is acting upon any support system.
- Accumulation and loss of fines – when water flows through soil it can pick up very fine material and deposit this material elsewhere. If you see silty deposits building up, one should ask the question: “where has that material come from?”. It may be an indication that voids have formed in the ground where the fines have been washed out.
- Flowing water – unless it is known that the temporary works are taking place where flowing water is expected (i.e. a cofferdam in a river) then flowing water is never a good sign. It may indicate a burst pipe or other flooding conditions, but water is also responsible for many of the risks around groundworks.

## A few tell-tale signs continued

### Bridging Specific

- Loose fixings between the bearing base plates and the abutment
- Panels, reinforcing chords and decks vertically and / or laterally out of alignment or twisted
- Damage to anti-skid material on decks can be a sign of damage, excessive wear resulting in ineffective anti-skid capabilities

### Propping and Jacking Specific

- Props out of square, causing eccentric loads
- Loose holding down fixings
- Damage to façade, such as cracking or crushing
- A gap between the temporary works system and the façade, this should be tight
- Deformation and / or deterioration of the temporary works system components

The above list of tell-tale signs are non-exhaustive examples to highlight signs that something is not right with the temporary works equipment. If any of the dangers mentioned above, or others not listed are identified on site, it is **important that the temporary works designer is consulted** so that the original design can be assessed to ensure that risk is minimised if not eliminated.

## Inspection of Temporary Works - General

Temporary works good practice is to inspect and issue a permit at the start of each shift **before** anybody enters or carries out work near to the work area. This means that on an active site, the area and equipment will be properly assessed almost every day. However, while a site is suspended, it could result in projects being left uninspected, for a prolonged period.



Within the following inspection sections are examples of items that need to be inspected, checked and maintained on a regular basis by a **responsible, competent person**, even if nobody is entering the area of works. These include, but are not limited to, the following points:

- Inspect and maintain safety protection systems
  - Ensure that edge protection remains adequate
  - Ensure that access and egress remains safe; for example, a stairway may be in place, but over time, the path leading to the stairway has become flooded and boggy and is no longer safe under foot.
- Ensure all bolted or pinned connections are in place and are not loose.
- Check for deformation of equipment, particularly at connection locations.
- Check the overall condition of equipment, no deterioration should be present.
- Ensure there has been no weakening of the system due to vandalism and / or theft.
- Some temporary works systems may need re-stressing and it is strongly advised to incorporate monitoring where necessary.
- Check all items are still installed as per annotated construction / scheme drawing and / or user guide requirements.
- **Under no circumstances can any modifications be carried out to equipment without consultation and approval from the designer.**



## Inspection - Groundworks Specific

- Soil properties must be thoroughly assessed to determine the level of risk.
- Drainage and dewatering systems.
  - Ensure that drainage is not become blocked or silted up over time.
  - Ensure that dewatering is operating properly and is having the intended effect of the temporary works and on surrounding ground and structures.
- Check and maintain any temporary structures.
  - Check for “creep” or slow continuous movement in structures by marking off and recording the positions of, for example, hydraulic rams, struts and ties, thrust blocks etc.
  - Check weep holes, interlocking sheets, gabion baskets etc. to ensure that the structure water-tightness has not significantly increased or decreased.
- Check and maintain anchor systems.
- Check for erosion of the ground, this can be an early indication of a potential failure occurring.
- Visually check for bowing and bellying of waler systems and trench sheets / sheet piles.



## Inspection of Excavations and Other Temporary Works Continued

### Propping and Jacking Specific

- Check bolted connections between prop units and prop units to screw jacks, ensuring bolts are tight.
- Ensure each inclined prop / raker is still installed as per annotated construction drawing
- Ensure that screw jacks at the top of props are tight, ensuring contact between timber packs and steel soffit remains.
- Check bracing members are straight with no defects / damage.
- Check holding down fixings are still in position and tight.
- Ensure all scaffold couplings are tight and that, where installed, the edge protection system is complete and adequate.



### Bridging Specific

- Visually inspect parts for interference, particularly adjacent to vehicle / rail passage
- Ensure all mesh panels, where required, are in position with no notable signs of damage
- Ensure all sway braces and vertical braces are securely bolted in position
- Ensure all bearings are clear of debris and free to expand
- Check all pins and clips are in place and correctly positioned
- Check all bolted connections are in place and tightened



There may be some exceptional cases where the excavation or other temporary works is away from any human activity, other services and structures and partial or complete failure does not pose a safety or commercial risk.

Nevertheless, in most cases, the failure of an excavation or other temporary works system would be undesirable and so the above inspections should take place as often as required to ensure stability of equipment and supported materials, and a high level of safety is maintained.

## Responsibilities and Guidance Documents

It remains the responsibility of the Principal Contractor of a project to appoint a responsible, competent person for managing activities on site.

References, Legislation and Guidance documents stated in product specific user guides should be referred to along with the **Code of practice for temporary works procedures** and the **permissible stress design of falsework BS5975 : 2019** and **Retention of masonry facades - Best practice site handbook - CIRCA C589**.

## Emergency Contact Details

Mabey Hire Ltd. have a dedicated Emergency Team, based over 4 depots across the network. The team are there to provide an rapid response to our customers in an emergency situation. Please note that, in line with current guidance, we will be responding to each situation by carrying out a case by case assessment.

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