

MANAGEMENT OF TEMPORARY WORKS

CONSTRUCTION ENGINEERING SPECIALIST TEAM

2010/11 Management of Temporary Works Project



- Promote awareness and knowledge of the importance of managing temporary works
- Improve contractors' management arrangements of temporary works
- Increase the competency of those engaged in temporary works management and design
- Reduce accidents arising from temporary works failures

What is Temporary Works?

- Defined in BS 5975
- An 'engineered solution' used to
 - Support or protect an existing structure or the permanent works during construction
 - Support an item of plant or equipment
 - Support an excavation
 - Provide access

Examples of Temporary Works

- Earthworks
 - Trenches, excavations, temporary slopes and stockpiles. Cofferdams
- Structures
 - Formwork, falsework, propping, façade retention, needling, shoring, edge protection, temporary bridges, site hoarding and signage, site fencing.
- Equipment/plant foundations
 - Tower crane bases, supports, anchors and ties for hoists, MCWPs, crane and piling platforms

Guidance on Design and Management of Temporary Works



- BS5975 : 2008 Code of practice for temporary works procedures and the permissible stress design of falsework
- SIM 02/2010/04 : The management of temporary works in the construction industry
- www.temporaryworks.info

BS 5975:2008



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BS 5975:2008
Incorporating Corrigendum No. 1

BSI British Standards

Code of practice for temporary works procedures and the permissible stress design of falsework

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BS 5975:2008



- Recommendations and guidance on procedural controls to all aspects of temporary works and on design of falsework
- Cl. 5 Legislation
- Section 2 : Procedural control of temporary works
- Section 3 : Design


SIM 02/2010/04 : The management of temporary works in the construction industry



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 Health and Safety Executive

The management of temporary works in the construction industry

SIM 02/2010/04

Open Government Status:
Fully Open
Author Unit/Location:
Construction Engineering Specialist Team (CEST)
Target Audience:
Construction Division staff, Construction Inspectors and Specialist Inspectors (Construction Engineering)

- Summary
- Purpose
- Background
- Temporary Works Management
 - Temporary works procedures
 - Temporary Works Coordinator (TWC)
 - Temporary Works Register
 - Design brief
 - Temporary works design
 - Design Checks
 - Temporary works management arrangements suitable for small contractors
 - The role of CDM co-ordinators
- Action by Inspectors
 - General
 - Legislation
 - Enforcement guidance
 - Enforcement action
- Advice and Support
- References
- Appendix 1 – temporary works design principles and the consequences and causes of failure
- Appendix 2 – the impact of changes to the construction industry on temporary works management and the history of BS 5975

Summary

This SIM provides guidance to inspectors on temporary works management in the construction industry and

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how inspectors should approach enforcement of the topic.

Purpose

This document should be used as the basis for undertaking operational work on this topic in accordance with Construction Division's current work plan. This is a new topic introduced in to the work plan in order to highlight and better control the risks associated with all types of temporary works on construction sites (although there are clear links to existing priorities, e.g. tower crane safety and structural stability). As this is new work, the SIM will be reviewed and revised in the light of operational experience and, as such, constructive feedback would be welcomed.

The aim of the planned work is to:

- Promote awareness and knowledge of the importance of managing temporary works
- Improve contractors' management arrangements of temporary works
- Increase the competence of those engaged in temporary works management and design
- Reduce accidents arising from temporary works failures

Background

"Temporary works" is a widely used expression in the construction industry for an "engineered solution" used to support or protect an existing structure of the permanent works during construction, or to support a item of plant or equipment, or the vertical sides or side-slopes of an excavation, or to provide access. The construction of most types of permanent works will require the use of some form of temporary works.

Temporary works is defined in BS 5975: 2008 "Code of practice for temporary works procedures and the permissible stress design of temporary works" as "those parts of the works that allow or enable construction of, protect, support or provide access to, the permanent works, and which might or might not remain in place at the completion of the works".

Examples of temporary works include, but are not limited to:

- Earthworks - benches, excavations, temporary slopes and stockpiles.
- Structures - formwork, falsework, propping, facade retention, needling, shoring, edge protection, scaffolding, temporary bridges, site hoarding and signage, site fencing, cofferdams.
- Equipment/plant foundations - tower crane bases, supports, anchors and ties for construction hoists and mast climbing work platforms (MCWPs), groundworks to provide suitable locations for plant erection, e.g. mobile cranes and piling rigs. Further information on temporary works design principles and the consequences and causes of failure are set out in Appendix 1.

Temporary Works Management

The correct design and execution of temporary works is an essential element of risk prevention and mitigation in construction. BS 5975:2008 provides recommendations and guidance on the procedural controls to be applied to all aspects of temporary works in the construction industry and on the design, specification, construction, use and dismantling of falsework. Background information on the impact of changes to the construction industry on temporary works management and the history of BS 5975 are set out in Appendix 2.

Temporary works procedures

Contractors should be able to demonstrate that they have in place effective arrangements for controlling risks arising from the use of temporary works. These are usually captured in a temporary works procedure which will contain most or all of the following elements:

- Appointment of a Temporary Works Coordinator (TWC)
- Preparation of an adequate design brief.
- Completion and maintenance of a temporary works register
- Production of a temporary works design (including a design risk assessment and a designer's method statement where appropriate).

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Roles and Responsibilities

- Design Brief
- Temporary Works Co-ordinator
- Temporary Works Supervisor
- Temporary Works Register
- Use of specialist contractors and suppliers
- CDM-C Role?

The Role of the Temporary Works Coordinator

- Explained in SIM and BS5975
- Qualifications and Experience
- TW Training
- Authority to stop the works without referral elsewhere
- Other roles on site

The Role of the Temporary Work Supervisor

- Explained in SIM and BS5975
- Qualifications and Experience
- TW Training
- Other roles on site

Design of the Temporary Works

- Is there a documented design brief?
- Is the design undertaken in-house, external supplier, subcontractor, permanent works engineer, combination of these?
- Standard proformas?
- Methods of communication?

Temporary Works – Proprietary Equipment



- Proprietary equipment supplier
 - Have they designed the foundations?
 - Any assumptions made that the PC has to confirm/investigate
 - Independent checking? By who?
 - Status of drawings
 - Checking procedures on site

Temporary Works Management Arrangements Suitable for Small Contractors

- Are principles of BS5975 in place:
 - Ensuring a competent designer/adviser is in place to supply an engineered solution
 - Adequate communication
 - Design checking to an appropriate level
 - Suitable checks on erection/installation
 - Someone co-ordinating the whole process

The Role of the CDM-C in Management of Temporary Works



- Any involvement with the temporary works?
- Checks on competence on designers
- Steps taken to ensure co-operation between the permanent and temporary works designers
- Discussed at CDM co-ordination or site meetings
- Advise clients on the suitability of the initial construction phase plan. i.e. the arrangements for controlling significant site risks