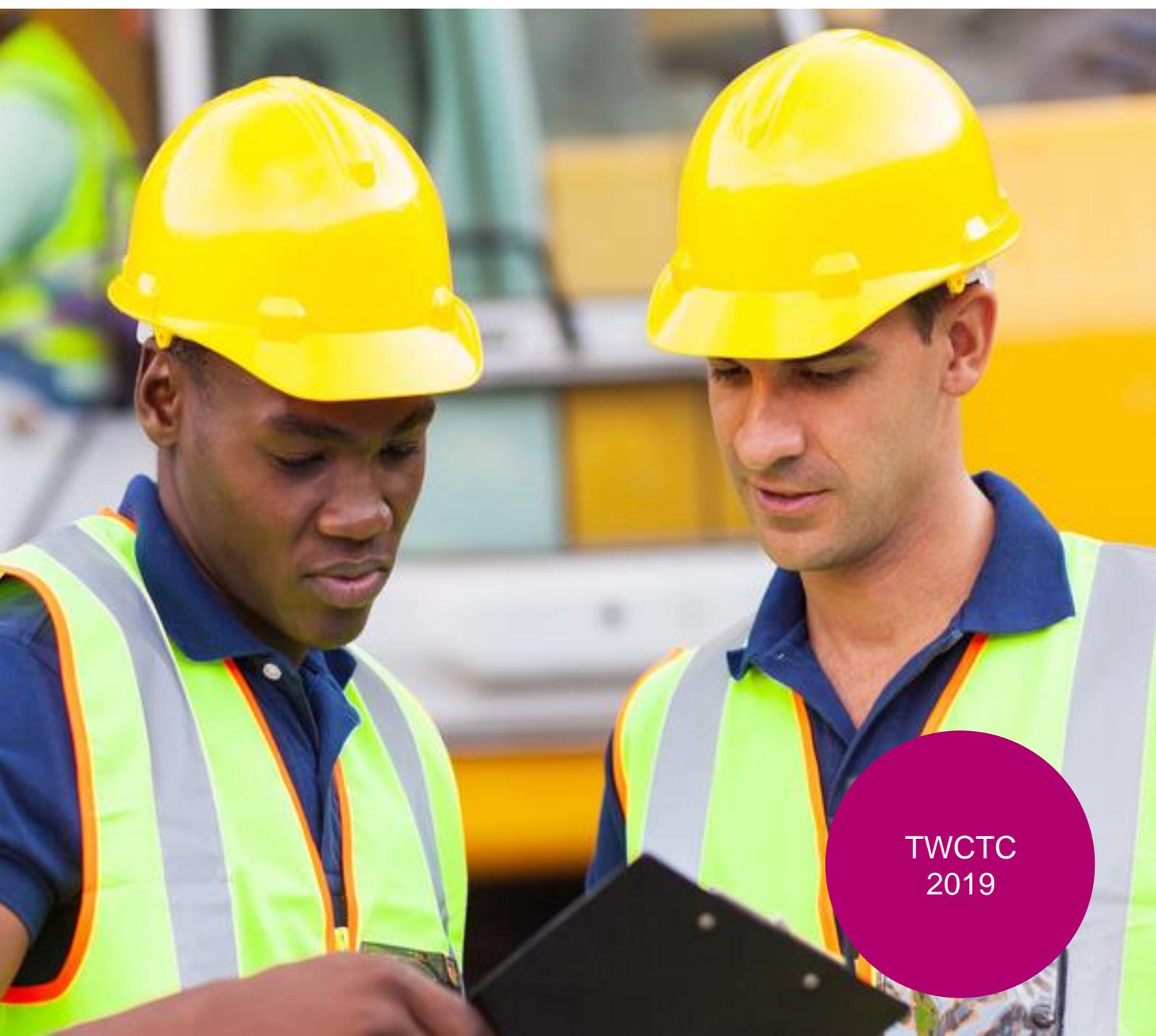


SITE SAFETY PLUS

Scheme rules – Appendix L Temporary works co-ordinator training course (TWCTC)



TWCTC
2019

Site Safety Plus

Temporary works co-ordinator training course (TWCTC)

Course appendix L

1.	Introduction	3
2.	Aims and objectives	3
3.	Entry requirements	3
4.	Assessment	4
5.	Delegate numbers	4
6.	Course duration and attendance	4
7.	Progression	4
8.	Course publications and materials	4
9.	Notes to training providers	7
10.	Suggested timetable	10
11.	End of course examination rules	14
12.	Trainer requirements	14
13.	List of abbreviations	15

1. Introduction

The two-day Temporary Works Co-ordinator Training Course (TWCTC) course is designed to assist those on site who have responsibility for managing all forms of temporary works. The course has been designed to give confidence to senior management, and to ensure that those who engage contractors have an assessed standard of knowledge.

The course is supported by a number of organisations including Temporary Works Forum CECA, Build UK, HSE and FMB, which enables transferability of the training within industry.

Temporary works are safety and business-critical and require careful co-ordination. An accepted way of achieving this is through the adoption of the management process outlined in BS 5975, which introduces the Temporary Works Co-ordinator (TWC) as a key figure. This course explains the role and the overall management context within which it sits.

High risk can occur on small as well as larger sites; hence, understanding the essentials of good safety risk management, as outlined in BS 5975, is relevant for projects of all sizes.

This course will give the delegate thorough knowledge of the Temporary Works Co-ordinator role. However, this does not alone make a delegate competent, as this requires other attributes e.g. experience.

2. Aims and objectives

This course is not a temporary works awareness course. It is only concerned with the process of co-ordination of temporary works, commonly expressed through the role of the Temporary Works Co-ordinator. Attendance does not confer competency as a Temporary Works Co-ordinator.

2.1. Aims

To ensure that all those given temporary works co-ordinating responsibilities understand:

- the need for and duties of a TWC
- the roles of others
- the BS 5975 in respect of the role
- the importance of the '4Cs': communication, co-ordination, co-operation and competency
- the need for risk management.

2.2. Objectives

At the end of the course delegates will be able to:

- understand the duties of a TWC and roles of others
- have detailed knowledge and understanding of BS 5975
- understand how to manage risk
- implement the '4Cs' effectively in the workplace.

3. Entry requirements

There are no formal entry requirements; however, delegates should hold or be about to hold the role of a Temporary Works Co-ordinator.

4. Assessment

Assessment will be by multiple-choice questions at the end of the course. Delegates are also expected to be interactive during the course.

5. Delegate numbers

The minimum number of delegates per course is 4. The maximum number of delegates per course is 20. These minimum and maximum delegate numbers are not subject to an appeal.

6. Course duration and attendance

This course is designed to be completed over two consecutive days. Delegates are required to attend both days (14 hours) and to pass the end of course assessment to be eligible for certification.

Delegates must attend the days in order and, where not on consecutive days, must complete the course within two weeks.

Delegates unable to attend both days due to extenuating circumstances (e.g. certificated sickness) will need to enrol onto a new course in order to maintain continuity of learning outcomes, and attend both days again.

This course will give the delegate thorough knowledge of the Temporary Works Co-ordinator role. However this does not alone make a delegate competent, as this requires other attributes.

Competence comes from education, training and experience, and should be judged by an appropriate senior individual, usually referred to as the Designated Individual (DI). Training is considered an essential element of Temporary Works Co-ordinator competence.

7. Progression

The natural progression from this course would be to either the Site Management Safety Training Scheme (SMSTS) or Director's Role for Health and Safety (DRHS) course where duties allow.

8. Course publications and materials

It is mandatory for all delegates to have a comprehensive understanding of BS 5975:2008 + A1:2011. Ideally delegates should have a copy of BS 5975; however, their own organisation's procedures and guidance on temporary works may be more suitable for reference during the course.

8.1. Recommended supporting publications

- BS EN12811(1: 2003 ¹ Temporary Works Equipment, Scaffolds. Performance Requirements and General Design.
- BS EN12812:2008 Falsework – Performance Requirements and General Design.
- BS EN12813:2004 Temporary Works Equipment. Load Bearing Towers of Prefabricated Components. Particular methods of structural design.
- NASC TG20:13 with eGuide disc.
- NASC TG9:12.

- BS7121 suite of standards.
- Bragg, S.L., Interim report of the advisory committee on falsework. 1974 HMSO and the final report issued in 1975.
- Construction (Design & Management) Regulations 2015.
- HSE CIS56 – Safe erection, use and dismantling of falsework.
- Concrete Centre.
- CSG005 – A Guide to the Safe Use of Formwork and Falsework, CONSTRUCT, 2008.
- ICE manual of health and safety in construction. Thomas Telford 2010.
- Temporary Works: Principles of Design and Construction. Thomas Telford 2010.
- Retention of Masonry Facades – best practice guide C579, CIRIA, 2003.
- Formwork – a guide to good practice, 3rd Edition CS030, The Concrete Society, 2012.
- Competency of the TWC (TWf advice note) at the Temporary Works Forum at [TW Forum](#).

¹ There is a concern relating to the removal of ledger bracing implicit within this standard. See TG20:13 for details

8.2. Supplementary information

The role of the Temporary Works Co-ordinator is explained in the latest version of BS 5975. This is as follows (table taken from TW/11/27 'Competencies of the TWC', which in turn is taken from the British Standard). The table is available on the Temporary Works forum website.

a	Co-ordinate all temporary works activities.
b	Ensure a temporary works register is established and maintained.
c	Ensure that the various responsibilities have been allocated and accepted.
d	Ensure that a design brief is prepared with full consultation, is adequate and is in accordance with the actual situation on site.
e	Ensure that any residual risks, identified at the design stage, assumed methods of construction, or loading constraints identified by the designer of the permanent works are included within the design brief.
f	Ensure that a satisfactory temporary works design is carried out.
g	Ensure that a design check is carried out by someone who was not involved in the original design; this should include: <ul style="list-style-type: none"> • Concept • Structural adequacy • Compliance with the brief²
h	Where appropriate, ensure that the design is made available to other interested parties e.g. the designer of the permanent works.
i	Register or record the drawings calculations and other relevant documents relating to the final design.
j	Ensure that those responsible for on-site supervision receive full details of the design, including any limitations and guidance notes associated with it and prepare a specific method statement.
k	Ensure that checks are made at appropriate stages.

l	Ensure that any proposed changes in materials or construction are checked against the original design and appropriate action taken.
m	Ensure that any agreed changes, or correction of faults, are correctly carried out on site.
n	Ensure that during the use of temporary works all appropriate maintenance is carried out.
o	After a final check which is satisfactory, ensure a permit to load (bring into use) is issued by either the TWC or TWS, issue formal permission to load/bring into use.
p	When it has been confirmed that the permanent structure has gained adequate strength and/or stability, ensure a permit to unload (take out of use) the temporary works is issued by either the TWC or TWS (see 7.3.3).
q	Ensure that a documented safe system of work is in place and implemented for the dismantling of any temporary works.
r	Ensure that any relevant information for the health and safety file is transmitted to the principle designer.
s	In all cases, ensure that the TWS's are operating in accordance with the approved procedures.

² Also (suggested by TWf) 'interdependency with all other components which form a part of the structural system'. It is important that someone is formally required to give an overview of the design (which may be carried out by more than one party) to ensure it is robust as an entity.

8.3. Subject 6 'Role of the TWC' alternative delivery

A	Co-ordination	
	Co-ordinate all temporary works activities	a
	<i>Comment: needs good understanding of the whole picture and in particular 'interface' issues. Include permanent works designer where relevant.</i>	
B	Records	
	Ensure a temporary works register is established and maintained.	b
	Register or record the drawings, calculations and other relevant documents relating to the final design.	i
	Ensure that any relevant information for the health and safety file is transmitted to the principle designer.	r
	<i>Comment: good systems can make an onerous task simple and effective.</i>	
C	Design	
	Ensure that a design brief is prepared with full consultation, is adequate, and is in accordance with the actual situation on site.	d
	Ensure that any residual risks, identified at the design stage, assumed methods of construction, or loading constraints identified by the designer of the permanent works are included within the design brief.	e
	Ensure that a satisfactory temporary works design is carried out.	f
	Ensure that a design check is carried out by someone who was not involved in the original design; this should include: <ul style="list-style-type: none"> • concept • structural adequacy • compliance with the brief. 	g
	Where appropriate, ensure that the design is made available to other interested parties e.g. the designer of the permanent works.	
	<i>Comment: a good design brief is essential. It requires experience to write. Item f should ensure ERIC is adopted.</i>	

D	Information flow	
	Ensure those responsible for on-site supervision receive full details of the design, including any limitations and guidance notes associated with it, and prepare a specific method statement.	J
	<i>Comment: information flow is a key item in managing safely. Differentiate between a 'check' and a 'review'. See SCOSS advice on review.</i>	
E	Checks	
	Ensure that checks are made at appropriate stages.	k
	Ensure that any proposed changes in materials or construction are checked against the original design and appropriate action taken.	l
	Ensure that any agreed changes, or correction of faults, are correctly carried out on site.	m
	Ensure that during use of temporary works all appropriate maintenance is carried out.	n
	After a final check which is satisfactory, ensure a permit to load (bring into use) is issued by either the TWC or TWS; issue formal permission to load/bring into use.	o
F	Permits etc.	
	When it has been confirmed that the permanent structure has gained adequate strength and/or stability, ensure a permit to unload (take out of use) the temporary works is issued by either the TWC or TWS.	p
G	Procedures	
	Ensure that the various responsibilities have been allocated and accepted.	c
	Ensure that a documented safe system of work is in place and implemented for the dismantling of any temporary works.	q

9. Notes to training providers

Training providers may make minor adjustments to the programme to meet delegate needs so long as the aims and objectives of the course are met.

The requirement is:

- Trainers will develop detailed notes, case studies and exercises from the outline syllabus, suitably indexed and presented for the delegate to take away on completion. It is essential that the underlying theme of proportionate risk management, from a safety and business critical perspective, is present throughout the module.
- Notes should expand on and explain the background, and in particular the role of the TWC as set out in BS 5975 as well as giving explanation to other aspects of the module. Trainers may assume that delegates will bring their own copies of BS 5975.
- Notes will form a delegate pack to be issued on the day. These will be updated by the trainer as required to ensure they are contemporary.
- The notes will be supplemented by hand-outs for exercises.

CITB have a licence with BSI which enables training providers to reproduce up to 20 copies (per provider) of section 2 clauses 6(14) only of BS 5975, for use in training material. These copies must be retained by the provider.

Copies of any significant proposed programme changes, if any, must be submitted prior to course delivery.

All trainers must adhere to the course note requirements.

9.1. Distribution and format

Notes should be issued at the commencement of the course and be hard copy, unless delegates have been notified prior to the course that electronic measures, for example USB sticks, will be handed out instead. Trainers should be aware that the latter option will require all delegates to have tablets or laptops in order not to be disadvantaged.

9.2. Course note content

This will not be satisfied by:

- i. Copies of slides (slides should follow good practice and contain minimal textual information).
- ii. Sole inclusion of company procedures (which just say what must be done, without any background, and will not cover the entire course), relevant though both may be.

The notes are expected to cover the entire course subject matter. For example:

- i. The historical background.
- ii. The key Bragg recommendations.
- iii. Risk management philosophy.
- iv. Examples of failure.
- v. The '3Ps', '4Cs', ERIC.
- vi. Contract and statute and their impact on the TWS.

All the above need explanatory notes to 'tell a story' (and none are contained sufficiently, or at all, within BS 5975).

- i. The individual duties of the TWS require example and explanation (some require particular prominence e.g. supervision and checking, as does the appointment and roles of others.) How the role fits into typical contractual scenarios.
- ii. Case studies also require written provision.
- iii. Sample forms, examples of completed forms etc.
- iv. Delegate exercises.
- v. References, further reading.

This is not an exhaustive listing.

If the course is in-house then it is expected that the trainer inserts company procedural examples and requirements into the notes, or alternative method, as agreed with the client.

9.3. Interaction with delegates

It is expected that the course will involve a significant number of exercises and discussions. The former should be outlined in the notes.

Examples should be spread across the construction field as far as reasonable, specifically buildings and civil works, including above and below ground temporary works situations.

9.4. The risk management thread

This is a risk management course. It happens to concentrate on the role of the TWC in managing the coordination of temporary works to ensure failure is averted. However, although avoiding failure, from a safety perspective, is the prime aim (and the original concept of the TWC), avoiding failure from a business/commercial perspective follows closely behind in importance. The same processes can be used and both should be given emphasis. The basis of the risk management process is derived from safety legislation (hence ERIC) but can be used for any type of risk.

The course, and notes, should give emphasis to:

- ERIC
- the '3Ps'
- the '4Cs'

As being essential tools to the understanding of proportionate qualitative risk management where the majority of problems (but not all) lie with the first two 'Ps' – People and Process.

9.5. References for trainers

These provide background information and advice for trainers. Whether they are drawn to the attention of delegates is for the trainer to decide. They are written largely for permanent works but the principles apply to temporary works.

Practical application of risk management

Report: *The Structural Engineer*, 15 July 2003 pp19-20

A simple approach to the management of risk on civil and structural engineering projects

Viewpoint: *The Structural Engineer*, 7 April 2010 p20

Guidance for Designers at

<http://www.citb.co.uk/cdmregs>

10. Suggested timetable

Please note indicative times are shown below. The trainer has some discretion but it is expected the times on each module are broadly followed. The way in which the modules are delivered is down to training provider/delegate requirements

Time	Subject	Content
20 minutes	1. Course administration	Registration and domestics in accordance with venue requirements.
90 minutes	<p>2. Function of module</p> <p>A brief overview of temporary works and their function.</p> <p>Why temporary works is important:</p> <ul style="list-style-type: none"> • Safety critical: legal requirements • Business critical. <p>Roles</p> <ul style="list-style-type: none"> • Client, contractors, designers (permanent works and temporary works) APs, TWCs, TWSs, DI. • Contract and statute. 	<p>What are temporary works – definition of temporary works (BS 5975 or organisation's TW procedure).</p> <p>Important to stress range of reasons and that it is about managing risk in an integrated manner. Important also to stress the benefits of early consideration or temporary works in terms of time and money savings.</p> <p>Describe in relation to temporary works and their relationships. Statute overrides contract. An opportunity to initiate discussion on practical issues, points of concern etc.</p>
90 minutes	<p>3. Background</p> <ul style="list-style-type: none"> • Bragg • BS 5975:2008 +A1:2011 overview • Other relevant codes • Case examples of failure 	<p>Important to understand the background and how this is relevant today. Key Bragg conclusions, e.g. BS12811 etc.</p> <p>One example of failure to illustrate the risks to people and businesses of when failure to co-ordinate takes place. Most causes stem from 'soft risks'.</p>

Time	Subject	Content
90 minutes	<p>4 Statutory aspects to temporary works</p> <ul style="list-style-type: none"> • Regulations: CDM, WAH, PUWER, LOLER • Statutory aspects of: <ul style="list-style-type: none"> ○ Inspections ○ Stability (above and below ground) ○ Design (scaffold) 	<p>Important to know how 'temporary works' fits into these wider requirements. Corporate requirements.</p> <p>As these are statutory they are separated out; contractual and statutory responsibilities may differ.</p>
60 minutes	<p>5 Avoiding failure People, Process and Product (the '3Ps')</p> <p>People:</p> <ul style="list-style-type: none"> • Competence (corporate and individual) <p>Process:</p> <ul style="list-style-type: none"> • Clarity of responsibility • Procurement • Identifying site-wide issues and planning ahead • Design and checks • General • Installation • Use • Maintenance • Dismantling <p>Product:</p> <ul style="list-style-type: none"> • Standard solutions • Condition • Sourcing 	<p>The '3Ps' gives emphasis to the issues which maintain a safe place of work. Most failures occur due to a failing in people or process.</p> <p>Importance of ensuring the right persons are involved, supplemented by supervision where there is a shortfall. Ensuring one's own competence.</p> <p>Identifying interfaces.</p> <p>Importance of good practice: adequate time, good documentation, competent organisations, clarity of role.</p> <p>Key points e.g. design brief, stability (specifically lateral stability), and need for a review as distinct from a check.</p> <p>Examples of standard solutions; gaps in information provided; provenance.</p>

Time	Subject	Content
240 minutes	<p>6. Role of the TWC</p> <p>(source: BS 5975 or organisation's procedure if in-house course.)</p> <ul style="list-style-type: none"> • Appointment. • Role. • TWS interface and role. 	<p>Written appointment with detail of responsibilities. Role of principal/main contractor and DI.</p> <p>Syndicate exercises are particularly useful in this section to enhance the programme.</p> <p>A key part of the module. TWC duties can be presented as set out in the BS (chronologically) or grouped by subject/action type to give alternative presentation: see section 9.</p> <p>TWC needs to understand when, or if, a TWS should be appointed, the appropriate procurement method and how to specify the role of the TWS.</p>
60 minutes	<p>7. Management</p> <ul style="list-style-type: none"> • Basis of good management. • Administration: benefit of good temporary works systems • The Register 	<p>As with Section 6 above, on an external course this would be based on generic guidance following BS 5975 principles, but for an in-house course for an organisation with a temporary works procedure which conforms to BS 5975, this section should be based on that procedure.</p> <p>Communication, Co-operations, Co-ordination, Competency. Planning ahead.</p> <p>Requirements and tips for easy compilation and use.</p>

Time	Subject	Content
120 minutes	<p>8. Key aspects of different temporary works types e.g.</p> <ul style="list-style-type: none"> • Excavations • Falsework • Formwork • Earthwork • Working Platforms & Haul Roads • Cranes (Tower, Crawler & Mobile) • Scaffolding • Pressure Testing • Site Establishment • Demolition 	<p>This is a 'what to watch for' exercise.</p> <p>A spread is required but tailored to suit cohort of delegates e.g. civil or building.</p> <p>For each type of temporary works, the complete process is considered in terms of identifying requirements, options for temporary works solutions, preparation of design briefs, designs and checks (including check categories), construction, inspection, use, and dismantling of the temporary works.</p>
30 minutes	9. Examination	Multiple-choice question paper (question paper as allocated).
40 minutes	10. Course review	<ul style="list-style-type: none"> • Review of aims and objectives. • Did the course meet the objectives effectively? • Feedback forms completed. • Course paperwork completed and finalised inc. Course Assessment Reports.
Total 14 hrs	End of course	

11. End of course examination rules

11.1. Exam details

The examination paper is compulsory and consists of 25 multiple-choice questions selected by CITB.

It forms the basis of assessment as to whether or not a delegate has successfully achieved a satisfactory level of understanding to be awarded the *Temporary works co-ordinator training course* (TWCTC) certificate.

The examination lasts for 30 minutes and must be completed within this time.

The examination is open book.

The examination pass mark is 72%.

11.2. Re-sits procedure

Where a delegate has achieved 64%–68% in the examination, the delegate may re-sit the multiple-choice examination by attending another course on the final day, and subsequent arrangements will be at the delegate's own expense.

The training provider must make the arrangements with the delegate and ensure that the same examination paper is not used twice.

The delegate must re-sit the examination within 90 days of the last day previously attended.

A charge may be made to the delegate; however, this fee is left entirely to the discretion of the training provider. The training provider may also have additional costs to be recovered from the delegate and this should be agreed in advance.

Should the delegate fail the re-sit, they will be required to take the full two day TWCTC again, or will be offered an alternative course which is considered to match the delegate's level of knowledge and understanding.

12. Trainer requirements

In addition to the minimum trainer requirements in the Quality Assurance Requirements, trainers must have attended and achieved and hold a current certificate for this course and meet the criteria below:

- be a member of the Institution of Civil Engineers (MICE) or
- be a member of the Institution of Structural Engineers (MIStructE).

As good practice, but not mandatory, trainers will also hold:

- NEBOSH National Certificate in Construction Safety and Health
- Level 4 or 5 NVQ Diploma in Occupational Health and Safety Practice (or SVQ equivalent)*
- A Health and Safety degree
- NEBOSH Diploma in Occupational Safety and Health Part 2
- NEBOSH Units A, B, C & D
- IOSH Level 6 Diploma in Safety Management (or equivalent)

**Note: The Level 5 NVQ/SVQ in Occupational Health and Safety has replaced the Level 4 within the Qualifications and Credit Framework. Holders of the Level 4 qualification with a valid certificate will be accepted.*

Occupational health and safety competence will also be satisfied by Chartered Membership of ICE, IStructE or IOSH, although specific qualifications are encouraged such as ICE Health and Safety Register (Level 1) or equivalent.

13. List of abbreviations

3Ps	People, Process, Product
4Cs	Communications, Co-operations, Co-ordination, Competency
AP	Appointed Person
BS	British Standard
CDM	Construction (Design and Management) Regulations
CECA	Civil Engineering Contractors Association
DI	Designated Individual
ERIC	Eliminate, Reduce, Inform, Control
FMB	Federation of Master Builders
HMSO	Her Majesty's Stationery Office
HSE	Health and Safety Executive
ICE	Institution of Civil Engineers
LOLER	Lifting Operations and Lifting Equipment Regulations
NASC	National Access and Scaffolding Confederation
PUWER	Provision and Use of Work Equipment Regulations
SCOSS	Standing Committee On Structural Safety
TWC	Temporary Works Co-ordinator
TWCTC	Temporary Works Co-ordinator Training Course
TWF	Temporary Works Forum
TWS	Temporary Works Supervisor
TWSTC	Temporary Works Supervisor Training Course
WAH	Working at Height Regulations