


Temporary Works Toolkit

Part 16: Legal requirements in the UK

The Temporary Works Toolkit is a series of articles aimed primarily at assisting the permanent works designer with temporary works issues. Buildability – sometimes referred to now as ‘construction method engineering’ – is not a new concept and one always recognised as vital to the realisation of one’s ideas; it ought to be at the forefront of an engineer’s mind.

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 **John Underwood** of the Health and Safety Executive introduces readers to the regulatory framework in the UK with regard to temporary works.

Introduction

Temporary works is a broad term that describes the approach to temporary conditions on a construction site. It used to be quite common to hear designers and construction staff argue that there was no legislation that required them to provide construction temporary works. In fact, this couldn’t be more wrong. This article reminds readers why health and safety legislation exists and highlights the main legislation in the UK where rigorous management of temporary situations and temporary works is demanded.

Where does the law come from?

In the UK, health and safety legislation is criminal law. The Health and Safety at Work etc. Act 1974 (HSW Act)¹ is the overarching act covering health and safety throughout the UK. Among other things, it lays down the fundamental requirement that workers and the public must be protected from harm as a result of work activities across all workplaces. Detailed regulations are made under the HSW Act. Look at the legislation first – it is a mistake to rely only on guidance.

Criminal law takes precedence over the wishes of a client. Work carried out by one party for another involves a written or implied

contract and that contract is made under civil law, which is subservient to criminal law. A client may not impose an expectation on a contractor that would require the contractor to breach criminal law, nor may they attempt to contract out of legal duties imposed upon them.

Reasonable practicability

Much modern legislation requires the duty holder to achieve a particular goal or status to the extent that it is ‘reasonably practicable’ to do so. In this sense, practicable is defined to mean ‘use of current technical or organisational means’. And reasonable means ‘not entailing excessive cost, time, effort or other resource’. Therefore, the balance to be struck is effectively between technical feasibility and cost – actions that are relatively cheap, easy and effective to achieve should be applied.

Some legal requirements are somewhat blunter – they require compliance so far as practicable. The cost in money, time and effort does not come into it – only technical or organisational limits apply. A few legal requirements are ‘absolute duties’ and simply demand that a particular state is achieved – no excuses, no claiming it is ‘too expensive’ or ‘too complicated’.

Managing risk

Where something new, novel or different is contemplated, or where a new workplace or a new task is to be started, those in control need to identify each significant hazard (danger) and put suitable controls in place to ensure that the risk of an incident is acceptably low^{2,3}. This involves risk management; a thinking process whereby information is gathered, assessed and conclusions reached. Risk assessment, a legal requirement, is used to work out whether a solution will be compliant. A designer or contractor cannot simply try something out to see whether it works – this is unsafe, expensive and a waste of time.

Guidance

In general, modern legal requirements are short in length but wide ranging. Greater detail is often found in guidance. For some legislation, the regulator publishes an Approved Code of Practice (ACoP). This carries some legal weight as a measuring tool to see how well the legislation has been complied with.

Other forms of guidance may assist with gaining an understanding of how to comply with the law, but the majority of guidance is not enshrined in law. This aspect often causes confusion. Most British (BS) and European (EN) Standards are guidance. They are drawn up by industry for industry to establish the minimum level that the industry believes it ought to achieve. A common mistake is to think that standards are legal requirements. They feature heavily

in contracts and in design specifications, but they all have a limited reach.

Trade association guidance can be an extremely useful reflection of what the trade body believes to be achievable. Indeed, some temporary works industry guidance is endorsed by the Health and Safety Executive (HSE) in the UK. In a small number of cases, the guidance is sufficiently robust, freely accessible, kept up to date, and covers a wide enough range of options to suit common situations that HSE Inspectors rely on the guidance as a starting point (benchmark) when considering whether compliance has been achieved.

How legislation applies to temporary works

The first thing to remember is that temporary works are not the start of the process. Rather, they describe a solution to a problem – the problem usually being that a ‘temporary condition’ exists and that something (often equipment based on and involving an engineered solution) is needed to prevent the temporary condition causing a danger.

Often, the temporary condition can be managed by using a particular method and sequence to carry out work, i.e. if the structure and the site can be kept in a safe condition and safe to access throughout the process, then plant, equipment and non-permanent works may be minimised or not needed. This means that permanent works designers play a critical role in determining the amount of temporary works that a project will require.

Selecting a build method, sequence, system of work, and associated equipment and a suitable workforce therefore involves making decisions based on a large number of variables. This can only be sensibly achieved by detailed preparation – early planning rather than rushing at the last minute is essential.

Guidance is available to assist with arrangements to manage temporary works. BS 5975⁴ contains detailed advice on procedures to manage temporary works. The Construction Industry Training Board (CITB) Cskills Awards (www.citb.co.uk/awards) accredit a range of national courses covering procedural good practice in the management of temporary works. These are aimed at those who already possess a good understanding and experience of the technical side of temporary works.

The combination of a procedure and the use of trained and experienced persons to operate it is a good starting point for ensuring that each contractor is legally compliant and able to deal with arranging construction works in a manner suited to the

TABLE 1: UK LEGISLATION WITH KEY LEGAL REQUIREMENTS IMPLICITLY APPLICABLE TO TEMPORARY WORKS

Section/Regulation†	Requirement
Health and Safety at Work etc. Act 1974 (HSW Act) (So far as reasonably practicable = SFARP)	
S2	Duty on employer to prevent harm to employees SFARP
S3	Duty on employers and self-employed to prevent harm to non-employees (other workers and the public) SFARP
S6	Duty on suppliers of articles and substances to ensure they are safe to use SFARP and supplied with instructions/information – this includes during transportation, assembly, installation, use, cleaning, maintenance, dismantling
S7	Duty on employees
Key parts of the HSW Act are necessarily short and to the point. The Act is goal setting (i.e. the aim being to avoid injury or ill health) and this allows individuals and organisations a large degree of freedom about how they plan and organise their operation. Much greater detail on duty holder duties is set out in subsidiary health and safety regulations	
Construction (Design and Management) Regulations 2015 (CDM)	
R2	Definitions include ‘construction work’ and ‘structure’
R4	Client duties
R5	Statutory appointments
R8	Competence
R9	Designer duties
R11	Principal (lead) designer duties
R12	Construction Phase Plan
R13	Principal (lead/main) contractor duties
R15	Contractor duties
R18(2)(b)	Site fencing* (and R13(4)(b) and R15(10))
R19	Stability of structures*
R20	Demolition/dismantling
R22	Excavations*
R23	Cofferdams/caissons*
R24	Inspection and reports*
R27	Traffic routes
R28(6)	Protection to prevent vehicles falling from edge of roadway*
CDM deals with project arrangements from inception. The client is required to lead and (in most projects) to appoint a principal designer and a principal contractor to coordinate the overlapping stages from preparation through conduct of the work. There are also specific requirements for the site arrangements to deal with specified types of work. Sensible management of temporary conditions and temporary works is an implicit expectation throughout CDM	
Management of Health and Safety at Work Regulations 1999 (MHSWR)	
R3	Employers and self-employed shall make suitable and sufficient risk assessment of all work activities affecting health and safety of employees and others
R4	Principles of prevention to be applied – remove main hazards and control remainder
R13	Workforce capabilities and training

TABLE 1: CONTINUED

R14	Employee duties
Risk management underpins all health and safety legislation. It is a fundamental and natural approach to assessing the best way of doing a job – MHSWR simply formalises what everyone does naturally to make it a more rigorous process. Anyone who thinks ‘risk assessment’ is what you do after you have decided how to do the work has completely missed the point. Risk assessment is about deciding how you will do the work and who will do it	
Provision and Use of Work Equipment Regulations 1998 (PUWER)	
R2	Work equipment definition – any machinery, appliance, apparatus, tool or installation
R4	Work equipment to be suitable for situation
R5	Maintenance
R6	Inspection
R8	Information and instructions to enable safe use
R9	Training in use of work equipment
R11	Prevention of access to dangerous (moving) parts
R20	Stability of equipment
Portable welfare and site offices, props, shoring, falsework, formwork, scaffolds, ladders, stair tower kits, etc. are all temporary works work equipment. This includes off-the-shelf and bespoke arrangements	
Lifting Operations and Lifting Equipment Regulations 1988 (LOLER)	
R4	Strength and stability of construction lifting equipment including ground conditions, load spreading devices, foundations, etc.*
R6	Positioning and installation
R7	Marking of lifting equipment
R8	Organisation of lifting operations
R9	Thorough examination and inspection
Temporary works may be provided for lifting plant to work from; lifting equipment may be needed to assemble/install/remove temporary works; and lifting equipment may be installed within temporary works	
Work at Height Regulations 2005 (WAHR) (Temporary works explicit throughout)	
R4	Planning and organisation of work at height
R5	Workforce competence
R6	Hierarchy – avoid work at height – collective protection preferred – then individual protection – individual fall arrest as a last resort
R7	Selecting equipment for work at height
R8	Requirements for stability, platforms, edge protection and access
R10	Preventing falling objects
R11	Exclusion zones if falling objects possible
R12	Inspection of work at height equipment
R13	Inspection of places of work at height
R14	Duties on persons working at height
Unless an existing place of work can be used for work at height without upgrading, all other work at height equipment and arrangements explicitly involve temporary works	
NB Order based loosely on order of application to a temporary works situation	
* Temporary works requirement is implicit unless marked with an asterisk	
† Key sections/regulations listed – check full statutory instrument to see other parts	

scale and complexity of the project. Where a party chooses not to utilise the BS 5975 approach or to formally qualify their staff, they still need to be able to show that they have achieved a robust means to manage temporary conditions and temporary works from inception to completion.

Legislation

There are a number of pieces of legislation in the UK with key legal requirements implicitly applicable to temporary works (Table 1).

Additional legislation is also likely to apply to temporary works. Table 2 highlights the need for those planning, arranging and carrying out the work to be fully aware of the work they are taking on (and how both the site, the contract and the decisions they take can influence the range of hazards they need to control).

In addition to workplace health and safety legislation, there will often be associated legislation and civil legislation that may apply to work being undertaken and to the finished product (Table 3).

All in all, this is a daunting list of examples (and it is not offered as a complete list). Information on each of these topics is available from official websites, e.g. the HSE website (www.hse.gov.uk).

Construction safety advisors will not be phased by the titles and terminology involved and many designers, contract managers, site managers and supervisors are familiar with the issues involved and know where to go for information and advice.

Temporary works exemplify an area where good preparation needs to involve advice and support from several individuals or organisations. Where this works effectively, the final approach will often be very different to the ideas first proposed. This is a good sign, as it means that creative thought by the team has identified options, problems and solutions. And by a process of refinement has provided the best result, best value, and highest confidence level that risk – in its widest sense – will be well managed. This effort contributes to bringing in the project safely, on time and within budget.

The blinkered alternative occurs where temporary works are not considered until the last minute, and only after build sequence and method have long been decided. This prevents an integrated approach and means that solutions may, at worst, be unsafe or, at best, over-engineered.

In the rush to implement and overcome early lack of preparation, opportunities to provide the safest and most economic

TABLE 2: OTHER HAZARDS AND LEGAL REQUIREMENTS WHICH MAY APPLY TO TEMPORARY WORKS

Legislation	Notes
Control of Substances Hazardous to Health Regulations 2002	Assessment of risk from all significant and potentially harmful substances that are brought to site, produced on site or encountered on site
Control of Asbestos Regulations 2012	Asbestos-related diseases are still thought to cause the death of some 2000 former and current construction workers each year in the UK – locating and correctly dealing with asbestos on a site is key to preventing this horror continuing
Manual Handling Operations Regulations 1992	Require assessment and provision of designs and systems of work to prevent manual handling injuries – a bad back should no longer be an inevitable consequence of working in the construction industry
Electricity at Work Regulations 1989	Applies to all work involving electrical systems, plant and tools – includes systems that power temporary works and avoidance of overhead and underground services that could be struck by temporary works
Confined Spaces Regulations 1997	Anywhere that ventilation is poor can become a confined space – even an open trench or a room or vessel – where the presence of noxious gas or a reduced oxygen level can prove fatal
Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR)	Sets out how to deal with volatile solids, liquids and gases that lead to risk of fire and/or explosion
Regulatory Reform (Fire Safety) Order 2005 / Fire (Scotland) Act 2005	(Note made under the Health and Safety at Work etc. Act 1974) Sets requirements for general fire precautions. Process fire safety is handled under CDM and DSEAR for construction sites
Pressure Equipment Regulations 1999 and the Pressure Systems Safety Regulations 2000	Design and inspection of pressurised equipment to prevent burst failures or injection of high-pressure fluids/gases into a person
Supply of Machinery (Safety) Regulations 2008	Will apply not only to your supplier/s but also to you if you build bespoke machinery or machine attachments for use at a work site
Explosives Regulations 2014	May be applicable in hard rock work, shaft sinking, tunnelling and some demolition
Work in Compressed Air Regulations 1996	Will apply where caisson or pressurised tunnel work or entry into a pressurised vessel is involved
Various legislation on: lead, noise, vibration, ionising radiation, personal protective equipment, diving, etc.	

NB Ordered loosely by frequency of application to temporary works

approach are often lost. Lack of preparation, consultation and coordination in connection with temporary conditions and temporary works is one of the more common reasons why projects fail to deliver acceptable safety performance and fail to come in on time and on budget.

Key messages to duty holders

If you are a client, the key message to take from this is that you can save money and get a better project outcome by ensuring the designers and contractors you appoint are able to start early to plan and arrange the work.

If you are a designer, your key message is that you need to convince the client that early appointment and preparation will streamline the project programme. And permanent works designers also need to be prepared to actively design out the need for temporary works, and

liaise with the contractor to refine a design to aid buildability, operability and maintainability.

If you are a contractor, be prepared to challenge (in a nice way) the client and the designer to provide sufficient background information early enough and in enough detail to allow you to plan and organise the work in a rigorous way. You need also to be thinking about site assessment, build sequence and the need for temporary works from tender stage onwards.

John Underwood is a Construction Inspector with the Health and Safety Executive in the UK.

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- 1) *Health and Safety at Work etc. Act 1974*
- 2) The Institution of Structural Engineers (2017) 'Managing Health & Safety Risks (No. 64): Hazards and risk assessments', *The Structural Engineer*, 95 (8), pp. 24–25
- 3) The Institution of Structural Engineers (2017) 'Managing Health & Safety Risks (No. 65): Probability and risk assessments', *The Structural Engineer*, 95 (9), pp. 30–31
- 4) British Standards Institution (2008) *BS 5975:2008 + A1:2011 Code of practice for temporary works procedures and the permissible stress design of falsework*, London: BSI (under revision)

TABLE 3: EXAMPLES OF LEGISLATION THAT MAY ALSO AFFECT TEMPORARY WORKS AND ASSOCIATED ACTIVITIES

Legislation	Notes
Highways Acts	Road closures, pavement possessions, obstructions in the highway, temporary traffic management, etc. all involve temporary works and need time and a timescale to allow arrangements to be agreed with the Highway Authority and put into effect
Planning Acts	Much demolition now requires planning permission; larger, long-term temporary works (including some facade retention, access and material handling facilities) may need planning permission; as will temporary sites such as construction shafts, off-site haul roads and material lay-down/transfer/storage areas, site accommodation blocks, etc.
Building Acts	Demolition notices are required for many structures to allow the local authority to stipulate making-good requirements
Building Regulations	Temporary works may influence the design of the permanent works of a building and any permanent effect on a part of the building that falls under Building Regulations will need to meet current requirements
Party Wall Act	Civil duty – works that could affect a boundary with other parties need to be agreed with the other parties, i.e. where off-site damage could result to adjacent properties
Occupiers Liability Act	Civil duty on site – owner to ensure those who could enter the site (at any time) are not placed at undue risk of harm
Construction Products Regulations 2013	EU legislation applying to all EU members – require products used in permanent works to comply with performance standards that are established for a wide range of products, including bespoke structural steelwork
Various environmental legislation	

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