

1. PURPOSE

This document provides detailed guidance to support the safe implementation of Temporary Works associated with VolkerRail construction activities. The document will detail the organisational requirements, roles and responsibilities for the personnel involved and the steps required to adequately:

- Identify,
- Plan,
- Design,
- Construct,
- Assure,
- Maintain & Inspect
- Dismantle,

All works defined as Temporary.

This procedure has been developed in conjunction with those documents detailed in section three

2. SCOPE

This procedure applies to all works under the control of VolkerRail and is associated with all activities defined as Temporary Works under BS5975.

Control, under this procedure, covers several scenarios of project delivery including where VolkerRail is involved in direct delivery as Principal Contractor, working as a part of an Alliance or in a Joint Venture, or working as a subcontractor to a Principal Contractor.

Temporary Works is defined as an engineered solution used to support or protect an existing structure or the permanent works during construction, or to support an item of plant or equipment or the vertical sides or side-slopes of an excavation, or to provide access.

There are situations within specific VolkerRail operations where some activities are deemed temporary by the nature of the timescales they are required, i.e., to facilitate a staged construction programme. These situations are often linked to VolkerRail systems requirements associated with the specific rail systems disciplines of:

- Signalling and Telecoms (S&T)
- Electrification & Plant (E&P)

These staged requirements are deemed permanent works and are not covered by the scope of this procedure.

It is the responsibility of the appointed Contractor's Engineering Manager (CEM) to determine these requirements and the applicability of this Temporary Works Procedure in consultation with the Designated Individual (DI) as appropriate.

3. REFERENCES (INPUTS) / RELATED DOCUMENTS

- Health and Safety at Work Act 1974
- Construction (Design and Management) Regulations 2015
- BS 5975:2019 Code of practice for temporary works procedures and the permissible stress design of falsework
- Eurocode 0: Basis of Structural Design
- NR/L2/CIV/003 Engineering Assurance of Building and Civil Engineering Works
- NR/L2/INI/02009 Engineering Management for Projects
- ENG01M002 - Management of Sub-contracted Design.
- ENG01M004 - Undertaking Designs
- ENG01M011 – Management of Engineering Competence for Projects
- Bragg Report 1975
- CIRIA 97 Trenching Practice

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4. DEFINITION AND ROLES
4.1 Responsibilities - corporate

In the course of a project, it is anticipated that VolkerRail will perform one or more of the following roles as identified below, all of which have defined statutory responsibilities in relation to temporary works in accordance with the CDM 2015 Regulations.

Role	Principal responsibilities
Principal Contractor	<ul style="list-style-type: none"> On all projects the responsibility for the control and management of temporary works sits with the Principal Contractor – the Principal Contractor will appoint the TWC (PC-TWC). Where VolkerRail is appointed as Principal Contractor and where an element of the work is either subcontracted to a directly contracted Contractor (sub-contractor) or to be delivered by an alliance or joint venture partner and where that party proposes to use their own management system, that management system will be assessed in accordance with CIV510F08 – this assessment will be completed by VolkerRail’s Designated individual (DI). Should the contractor’s procedure be found to be inadequate, the VolkerRail procedures will be implemented
Contractor	<ul style="list-style-type: none"> Where VolkerRail is working as subcontractor to the Principal Contractor or in an Alliance or joint venture where a supporting party is appointed as Principal Contractor – the VolkerRail Designated Individual must be satisfied that the Temporary Works procedure of the Principal Contractor meets the requirements of the VolkerRail Temporary Works Procedure. Where a deficiency is identified the requirements of the VolkerRail procedure will take precedence and the specific application is to be agreed between the VolkerRail Designated Individual and the counterpart in the Principal Contractor’s Organisation. In all cases VolkerRail will appoint a TWC to manage their own temporary works activities.
Designer	<ul style="list-style-type: none"> As a Designer operating on behalf of another party, that party must have a temporary works procedure which must meet the requirements of BS5975. Alternatively, and subject to agreement from all parties, this procedure will be implemented.
Principal Designer	<ul style="list-style-type: none"> To share with all parties, information that might influence the design of temporary works or the selection of construction methods.

4.2 Responsibilities – Personnel
4.2.1 Principal Contractor’s Designated Individual (PC-DI)

PC’s Designated Individual (PC-DI)	
Role	<ul style="list-style-type: none"> Custodian accountable for the organisation’s temporary works process. Assesses and documents the approval of the PC-TWC, TWC and TWS.
Responsibilities	<ul style="list-style-type: none"> The DI is responsible for reviewing all high-risk temporary works solutions during the design phase. Establishing, implementing, and maintaining the Temporary Works Procedure.

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PC's Designated Individual (PC-DI)	
	<ul style="list-style-type: none"> Validating the adequacy of temporary works procedures for client appointed contractors (Alliance Partners), design organisations and VolkerRail appointed contractors. Ensuring a competent PC-TWC is appointed to each VolkerRail project and that the project is advised of the suitable level of resources available to undertake the role comprehensively. Undertaking VolkerRail staff appointments associated with the temporary works, principally the PC Temporary Works Coordinator, additional Temporary Works Coordinators, and the Temporary Works Supervisor. Provides support to the PC Temporary Works Coordinator where required with respect to managing the pressures of the works. Ensure that the various responsibilities have been allocated and accepted. Defining the PC-TWC lines of responsibility in relation to other contractors' TWC.
Appointment	<ul style="list-style-type: none"> The Chief Engineer (previously the Engineering Director) is responsible for the formal appointment of the Designated Individual. The letter of appointment will be managed through the training and competency department.
Competencies	<p>1. Engineering knowledge and understanding</p> <ul style="list-style-type: none"> Demonstrate extensive knowledge of engineering principles. Apply technical knowledge to engineering and construction activities; and to identify limits of personal expertise. Takes the lead, e.g. when reviewing the suitability of their company's procedures for the management of temporary works. <p>2. Management and leadership</p> <ul style="list-style-type: none"> Leads by example within the organisation. Manage and develop individuals. Recognise the limits of expertise within a team, e.g. TWCs/TWSs ; and recommend training and development (as required). Develops and maintains respect of TWCs, e.g. in developing independent judgment of the TWC. Takes ownership of issues, e.g. the organisation's temporary works procedure, and knows when to update it to reflect regulatory changes and the business' core activities. <p>3. Health and safety Demonstrates:</p> <ul style="list-style-type: none"> an extensive knowledge of health safety and welfare regulations applicable to field of experience. a detailed knowledge of the CDM Regulations 2015 and BS 5975: 2019. <p>4. Independent judgement</p> <ul style="list-style-type: none"> Takes reasoned and measured decisions based on information provided. Withstands pressures of time and budgets when reviewing health and safety-based decisions. Knows when to support judgment calls, e.g., by the TWC, even if alternative decisions could be made (and when to offer alternative courses of action to the TWC).

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PC's Designated Individual (PC-DI)	
	5. Communication <ul style="list-style-type: none"> Communicates with individuals at all levels across the business in a clear and concise manner.

4.2.2 Contractor's Designated Individual (C-DI)

Contractor's Designated Individual (C-DI)	
Role	<ul style="list-style-type: none"> Custodian accountable for the organisation's temporary works process. Assesses and documents the approval of the TWC and TWS within own organisation
Responsibilities	<ul style="list-style-type: none"> Establishing a temporary works procedure that is appropriate to the size and complexity of the works being undertaken by the organisation. To provide a clear process for the on-site management of all aspects of the organisation's temporary works. Appointing staff into roles of TWC and TWS and ensuring that they are given sufficient time and resources to fulfil the role. Issuing copy letters of appointment to the PC DI where the subcontracting organisation intend to undertake temporary works as part of their subcontract. Appoint a TWC for each project who is: competent; given clear written authority; technically responsible to the DI; responsible for the implementation of the organisation's procedure; and the final authority on site for the safe use of any temporary works. Ensuring their own sub-contractors have suitable procedures and resources in place to manage any temporary works included within that sub-contract.
Appointment	<ul style="list-style-type: none"> The appointment of this role will be managed through the sub-contractor's management system.
Competencies	As defined within the organisation's own management procedures but with attributes aligned to the following; <ul style="list-style-type: none"> Engineering Knowledge and understanding Management and leadership Health & safety Independent Judgement Communication

4.2.3 Principal Contractor Temporary Works Coordinator (PC-TWC)

Principal Contractor Temporary Works Coordinator (PC-TWC)	
Role	<ul style="list-style-type: none"> The person with overall responsibility for implementing the temporary works procedures within a project. Authorises high risk temporary works.
Responsibilities	General <ul style="list-style-type: none"> The PC-TWC is accountable for the management of all temporary works activities associated with the project. The role is directly responsible and engaged in all temporary works activities that the PC delivers. The role will be additionally engaged in all temporary works activities of any client, client-contractor or sub-contractor, whether they are working under their own or VolkerRail's temporary works arrangements.

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Principal Contractor Temporary Works Coordinator (PC-TWC)	
	<ul style="list-style-type: none"> • Be the single point of contact for all temporary works for providing and receiving information from/to all parties (including any TWC). • Ensuring that the risks, TWC (PC & C) appointments and responsibilities associated with temporary works are documented in the Construction Phase Plan. • Documenting within the engineering management plan, the engineering system for the delivery of the project's temporary works. <p>Risk Management</p> <ul style="list-style-type: none"> • Ensuring that VolkerRail's procedure for the management of risks associated with temporary works is implemented. • Determine the implementation risk classification of all temporary works items in line with the appendices in this procedure, with client standards and with BS5975. <p>Temporary Works Register</p> <ul style="list-style-type: none"> • The PC-TWC will manage the Temporary Works Register and determine if multiple registers are required for contractors' temporary works, where they are working under their own management arrangements. <p>Designs</p> <ul style="list-style-type: none"> • The PC-TWC is responsible for communicating any directly managed temporary works design, and any subsequent alterations, to the CRE who will communicate the design to the on-site personnel in the usual manner. • Ensuring that suitable designs are prepared, checked and implemented in accordance with the relevant drawings and specification. • The PC-TWC is responsible for engaging with the designers to confirm the suitability of any changes to the TW design during the construction process. <p>Site Elements</p> <ul style="list-style-type: none"> • Receiving and managing all permit and inspection documentation from site. • Engaging with contractor TWCs to affect the safe and timely delivery of temporary works, including regular inspections on site. • Ensure that all TWC and TWS are operating in accordance with the approved procedures through regular on-site inspection. • The PC-TWC will bring into use all high-risk temporary works designs on site, ensuring that the appropriate permits are in place. • Undertake regular reviews of site documentation to ensure that the temporary works risks are effectively communicated from design to WPP and to TB. <p>Health & Safety File</p> <ul style="list-style-type: none"> • Ensure suitable information is provided for the health and safety file. <p>Contractor TWC Management</p> <ul style="list-style-type: none"> • Ensuring that the contractor's temporary works register is populated correctly and is up to date. • Ensuring that design briefs are comprehensive and effectively communicate design requirements.
Appointment	<ul style="list-style-type: none"> • All projects, from detailed design stage onwards, will have a PC-TWC appointed to them by the Designated Individual.

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Principal Contractor Temporary Works Coordinator (PC-TWC)	
	<ul style="list-style-type: none"> In environments when the works are extensive, the project may have a VolkerRail member of staff TWC appointed to share the workload, working for the TWC-PC. The Project Manager shall propose a PC TWC, in conjunction with the CEM to the DI. The DI is responsible for appointing the PC-TWC using the Form CIV510F01A to formally record the appointment which shall be on a project-by-project basis. The DI will interview all PC-TWC candidates before endorsing their appointment. Subsequent appointments may not require an interview but will require the formal appointment. The DI will maintain a spreadsheet of VolkerRail appointments. Delegation of PC-TWC duties may be considered where there are concerns regarding the availability and/or capacity of a candidate to manage all aspects of the temporary works. The DI will undertake the assessment of the delegate in the same manner as the TWC appointment.
Competencies	<p>The competency of the PC-TWC shall be as follows;</p> <ul style="list-style-type: none"> The TWC should have a relevant academic qualification (e.g., civil engineering degree, HND or HNC). The TWC must have a least 5 years' relevant experience of working on similar projects. The TWC must have attended a certified temporary works coordinator course. The TWC must have a detailed knowledge and understanding of this procedure and its implementation. Familiarity with the health and safety aspects of design and construction, and a commitment to carry out the project safely. Projects involving complex and/or high-risk temporary works the TWC should normally be a Chartered Engineer. Deviation from this may occur with the Designated Individual's agreement in writing. <p>Where the TWC, acting for the PC or otherwise, is engaged with the management of design, and not simply supervising the more complex works, the TWC will demonstrate management skills.</p>

4.2.4 Contractor Temporary Works Coordinator (C-TWC)

Contractor Temporary Works Coordinator (C-TWC)	
Role	<ul style="list-style-type: none"> The first point of contact within a subcontract organisation for liaison between the designer and the site team for all temporary works matters.
Responsibilities	<ul style="list-style-type: none"> Coordinate all temporary works activities for their organisation's temporary works matters, liaising with the PC-TWC. Be responsible for providing information and receiving information from the PC-TWC. Assist the PC-TWC in fulfilling their duties. Ensuring all relevant parties to the development and implementation of temporary works communicate, cooperate and coordinate. Ensuring that the appropriate procedure for the management of temporary works is implemented in line with the engineering management plan. Assist the PC-TWC in the management of the temporary works register(s) for designs within the contractor's scope. Issue contractor's register at agreed intervals

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Contractor Temporary Works Coordinator (C-TWC)	
	<ul style="list-style-type: none"> Engaging with PC- TWC to affect the safe and timely delivery of temporary works. Issue all TW design briefs and associated designs, to the PC-TWC. Ensuring that designs within the contractor’s scope are prepared, checked and implemented in accordance with the relevant drawings and specification. Bringing into use any medium, low, or very low risk temporary works and completing the associated documentation. Receiving and managing all permit and inspection documentation from site for onward issue to the PC-TWC. Ensure that any issues identified by the PC-TWC are rectified in a timely manner. Ensure suitable information is provided for the health and safety file. Ensure that all TWC and TWS are operating in accordance with the approved procedures through regular on-site inspection.
Appointment	<ul style="list-style-type: none"> When the contractor is using their own management system, and VolkerRail have agreed that they can do so, having undertaken and recorded an audit, then they will work to the appointment process within that system. In parallel and in more depth, when the project has agreed to use the VolkerRail management system, then the appointment process will use form CIV510F01B. In all instances, the VolkerRail DI will assess the TWC. The PC-DI will retain a copy of the contractor TWC appointment letter for individual projects.
Competencies	<ul style="list-style-type: none"> As defined within the organisation’s own management procedures

4.2.5 Temporary Works Coordinator (TWC)

Temporary Works Coordinator	
Role	<ul style="list-style-type: none"> Accountable to and supports the PC-TWC in the day-to-day management of the temporary works, authorising medium, low or very low risk works.
Responsibilities	<ul style="list-style-type: none"> Supervision and checking of very low, low, and medium risk temporary works notably during erection, use, maintenance, and dismantling stages. Authority to load and unload medium, very low and low risk temporary works.
Appointment	<ul style="list-style-type: none"> When VolkerRail needs resource to supervise on-site works which are deemed to be medium risk then a temporary works coordinator will be appointed. The CRE shall propose all Temporary Works Coordinators to the PC DI keeping the PC- TWC included in the correspondence. The PC DI is responsible for appointing VolkerRail TWC and any other TWC working under the VolkerRail TW management arrangements. Joint ventures and alliances will have temporary work arrangements identified and will work to those arrangements which shall have been reviewed and accepted by the VolkerRail DI. The C-DI is responsible for appointing TWC working under the contractor’s TW management system and providing details of the appointment to the PC-DI The PC DI will interview all candidates working under the VolkerRail arrangements prior to endorsing their appointments. Subsequent appointments may not require interview but will still require formal appointment.

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Temporary Works Coordinator	
	<ul style="list-style-type: none"> The PC DI will use the Form CIV510F01B to formally record the appointment which shall be on a project-by-project basis. The DI will maintain a spreadsheet of appointments. The CRE will record the appointment in the project specific ENG01-M011-F001. The TWC is responsible for communicating the temporary works design and any subsequent alterations, to the CRE who will communicate the design to the on-site personnel in the usual manner. The TWC will manage the temporary Works Register and any feeding arrangements into the PC-TWC register where those management arrangements are used. The TWC will be responsible for bringing into use all medium risk temporary works on site, ensuring that the appropriate permits are in place. This activity will be shared with the PC-TWC.
Competencies	<p>The competency of the PC-TWC shall be as follows;</p> <ul style="list-style-type: none"> The TWC should have a relevant academic qualification (e.g., civil engineering degree, HND or HNC). The TWC must have a least 5 years' relevant experience of working on similar projects. The TWC must have attended a certified temporary works coordinator course. The TWC must have a detailed knowledge and understanding of this procedure and its implementation. Familiarity with the health and safety aspects of design and construction, and a commitment to carry out the project safely. Projects involving complex and/or high-risk temporary works the TWC should normally be a Chartered Engineer. Deviation from this may occur with the Designated Individual's agreement in writing. <p>Where the TWC, acting for the PC or otherwise, is engaged with the management of design, and not simply supervising the more complex works, the TWC will demonstrate management skills.</p>

4.2.6 Temporary Works Supervisor (TWS)

Temporary Works Supervisor (TWS)	
Role	<ul style="list-style-type: none"> Accountable to and supports the TWC in the day-to-day management of the temporary works, authorising low or very low risk works.
Responsibilities	<ul style="list-style-type: none"> Supervision and checking of very low and low risk temporary works notably during erection, use, maintenance, and dismantling stages. Authority to load and unload very low and low risk temporary works.
Appointment	<ul style="list-style-type: none"> The CRE shall propose all Temporary Works Supervisors to the PC DI keeping the PC-TWC included in the correspondence. The PC DI is responsible for appointing VolkerRail TWS and any other TWS working under the VolkerRail TW management arrangements. The C-DI is responsible for appointing TWS working under the contractor's TW management system and providing details of the appointment to the PC-DI The PC DI will interview all candidates working under the VolkerRail management system prior to endorsing their appointments. Subsequent appointments may not require interview but will still require formal appointment. The PC DI will use the Form CIV510F02 to formally record the appointment which shall be on a project-by-project basis.

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Temporary Works Supervisor (TWS)	
	<ul style="list-style-type: none"> The DI will maintain a spreadsheet of appointments. The CRE will record the appointment in the project specific ENG01M011F01. The TWS is responsible for the supervision of the temporary works for the day-to-day operations of the construction phase which will involve full time presence, or regular inspection. The TWS is limited to authorising very low and low risk temporary works as described in appendix B. The TWS will use inspection checklists (procedure forms F06, F07 & F09) provided by the CRE to confirm the necessary control measures. Documents associated with quality inspections (ITPs and QCS) will be separate from the TW forms. All paperwork is to be returned to the office.
Competencies	<ul style="list-style-type: none"> The TWS is likely to have at least 3 years' experience of working on similar projects. The TWS must have attended a certified temporary works supervisor course. The TWS must have a detailed knowledge and understanding of this procedure and its implementation. The TWS must have a relevant H&S qualification.

4.2.7 Contractor's Temporary Works Supervisor (TWS)

Contractor's Temporary Works Supervisor (TWS)	
Role	<ul style="list-style-type: none"> Accountable to and supports the contractor's TWC in the day-to-day management of the temporary works, authorising low or very low risk works.
Responsibilities	<ul style="list-style-type: none"> Supervision and checking of the contractors very low and low risk temporary works notably during erection, use, maintenance, and dismantling stages. Authority to load and unload very low and low risk temporary works.
Appointment	<ul style="list-style-type: none"> When the contractor is using their own management system, and VolkerRail have agreed that they can do so, having undertaken and recorded an audit, then they will work to the appointment process within that system. The CRE will record the appointment in the project specific ENG01M011F01. When the project has agreed to use the VolkerRail management system, then the appointment process will be as above. The appointment form will be CIV510F02.
Competencies	<ul style="list-style-type: none"> As defined within the organisation's own management procedures

4.2.8 Temporary Works Designer (TWD)

Temporary Works Designer (TWD)	
Role	<ul style="list-style-type: none"> Preparation of the temporary works design in accordance with industry practices and assurance protocols.
Responsibilities	<ul style="list-style-type: none"> Preparation of designs for health and safety, with a particular emphasis on the fundamental design principles for temporary works. Management of foreseeable risks in line with the general principles of prevention: Eliminate, Reduce, Inform and Control.

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Temporary Works Designer (TWD)	
	<ul style="list-style-type: none"> Communicate, cooperate, and coordinate with other project partners.
Appointment	<ul style="list-style-type: none"> In accordance with the requirements of NR/L2/RSE/02009
Competencies	<ul style="list-style-type: none"> In accordance with the requirements of NR/L2/RSE/02009

4.2.9 Temporary Works Design Checker (TWDC)

Temporary Works Design Checker (TWDC)	
Role	<ul style="list-style-type: none"> Verification of the suitability of the temporary works design proposal.
Responsibilities	<ul style="list-style-type: none"> TWDC has the same responsibilities under CDM 2015 as the TWD and PWD.
Appointment	<ul style="list-style-type: none"> In accordance with the requirements of NR/L2/RSE/02009
Competencies	<ul style="list-style-type: none"> In accordance with the requirements of NR/L2/RSE/02009

4.2.10 Permanent Works Designer (PWD)

Permanent Works Designer (PWD)	
Role	<ul style="list-style-type: none"> Preparation of the permanent works design in accordance with industry practices.
Responsibilities	<ul style="list-style-type: none"> PWD has the same responsibilities under CDM 2015 as the TWD and TWDC.
Appointment	<ul style="list-style-type: none"> In accordance with the requirements of NR/L2/RSE/02009
Competencies	<ul style="list-style-type: none"> In accordance with the requirements of NR/L2/RSE/02009

4.2.11 Chief Engineer

Chief Engineer with regards to TW	
Role	Providing a single point of contact for the central engineering function facilitates cross-business communication and gives clarity of direction for the professional heads and Designated Individual
Responsibilities under this process.	<ul style="list-style-type: none"> Various and in accordance with job specification held within HR system. Responsible for the appointment of the Designated Individual and for the lodging of that appointment in the candidate's HR file. Responsible for the appointment of an interim Designated Individual, in the event of the appointed person being absent. Has delegated authority to make TWC/TWS appointments in the event of short-term absence or annual leave of the appointed person.

4.2.12 CEM

CEM with regards to TW	
Role	The appointed person within each design and/or construction organisation contracted to Network Rail, (or to a party other than Network Rail where agreed with Network Rail) with overall accountability for all that organisations engineering activities applicable to that specific CR-T; including those undertaken by subcontracted organisations.

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CEM with regards to TW	
Responsibilities under this process	<ul style="list-style-type: none"> Ascertain the application of the CDM regulations to the project. Ensure the client is aware of the PC-TWC appointment using NR/L2/INI/02009-F040 form. Ensure that temporary works arrangements are effectively detailed in the engineering management plan. The CEM will record the appointment in the project specific ENG01-M011-F001. The CEM will record the appointment in the Construction Phase Plan.
Appointment	<ul style="list-style-type: none"> In accordance with the requirements of NR/L2/RSE/02009
Competencies	<ul style="list-style-type: none"> In accordance with the requirements of NR/L2/RSE/02009

4.2.13 Construction Responsible Engineers (CRE)

Construction Responsible Engineers (CRE) with regards to TW	
Role	The appointed person within a design and/or construction organisation contracted to Network Rail, (or to a party other than Network Rail where agreed with Network Rail) with accountability for the day-to-day management and co-ordination of the technical and engineering activities within a specific engineering discipline for a specific CR-T.
Responsibilities under this process	<ul style="list-style-type: none"> Signing off the temporary works design brief. Control and mitigation measures for risks identified in the TW design are to be documented in the WPP and TB. The arrangements for temporary works must be clearly described in the task briefing documentation, signed off by the CRE or the nominated deputy. The CRE is responsible for ensuring that the arrangements for checking and inspections associated with the temporary works are carried out by the TWS or TWC. The CRE is responsible for ensuring that TWS are only allocated to Very Low and Low risk temporary works activities. The CRE will use the inspection sheets CIV510F06 and CIV510F09 contained within this procedure or may modify the sheet to suit a specific circumstance. The CRE is ultimately responsible for the TWS having appropriate documentation to record all inspections.
Appointment	<ul style="list-style-type: none"> In accordance with the requirements of NR/L2/RSE/02009
Competencies	<ul style="list-style-type: none"> In accordance with the requirements of NR/L2/RSE/02009

4.3 Delegation and Mentoring Arrangements

In the event that the Designated Individual is unavailable to make appointments, the VolkerRail Chief Engineer will appoint a delegated deputy who meets the competence requirements set out in this document.

4.3.1 Mentoring Arrangements

A mentorship arrangement will become necessary if the proposed individual is lacking in experience or knowledge. It should be noted that VolkerRail will mentor its own employees only.

In all cases the mentor will be appointed and competent in the role that the mentee is seeking appointment.

4.3.2 Mentoring for PC-TWC and TWC

In all cases where an individual has not yet met the competency criteria, a mentorship arrangement will be

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recorded in the register of appointed persons. Additionally, the mentorship arrangements will be recorded on the CIV510F01 (A or B) form.

The TWC under mentorship will have five different design briefs assessed and countersigned by their mentor.

The DI will audit the TWC under mentorship during their first project, and then as necessary until the DI is comfortable that the role is being carried out in a compliant manner.

The DI will review a written statement aligned to the following question set:

- a. Process
 - i. Please identify the key roles associated with the temporary works process.
 - ii. Please identify the key responsibilities associated with the role of TWC.
 - iii. Please identify the main stages which lead up to a piece of work commencing on site and the associated timescales.
 - iv. Please identify the roles you would engage with for a piece of temporary works with associated reasoning.
 - v. Please provide examples of CAT 0 temporary works.
 - vi. Please identify the standards associated with temporary works (National, client, VR)
- b. Excavations
 - i. Please identify the typical risks and solutions to excavation support.
- c. Compounds
 - i. Please identify which typical elements of a compound would be considered as temporary works and their associated design requirements.
- d. Others
 - i. Please identify the nature of any temporary works associated with a crane lift and describe the design requirements.

The DI will close out the mentorship arrangement when the evidence has been provided and when the mentor is comfortable with the experience and knowledge gained. This would typically be around 6 months subject to the nature and intensity of the project(s).

4.3.3 Mentoring for TWS

In all cases where an individual has not yet met the competency criteria, a mentorship arrangement will be recorded in the register of appointed persons. Additionally, the mentorship arrangements will be recorded on the CIV510F02 form.

The TWS will conduct their first shift as a shadowing shift with an experienced TWS. A report is to be written on this and the TWS mentee is to sign it.

Shift reports for the TWS under mentorship. A minimum of 5 shift reports from 5 different pieces of work are to be undertaken.

The DI will set a written test aligned to the following question set:

- a. Process
 - i. Please identify the two key roles associated with the temporary works process.
 - ii. Please identify the key responsibilities associated with the role of TWS.
 - iii. Please identify the documentation you would expect to receive prior to undertaking a TWS shift.
 - iv. Please identify the documentation you would expect to produce during the TWS shift.
- b. Excavations
 - i. Please confirm the impact of water ingress on the excavation.
 - ii. Please identify the maximum depth at which it is safe to enter an excavation.
 - iii. Please identify when it is safe to allow persons into an excavation.
 - iv. Please outline the activities you would undertake on site when carrying out this role.
 - v. Please identify different types of shoring available.

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- vi. Please identify areas of concern, other than water with regards to the stability of an excavation.
- c. Compounds
 - i. Please identify which typical elements of a compound would be considered as temporary works.
 - ii. Please detail the documentation you would complete, the nature of any concerns would you look for, and the frequency of completion.
- d. Others (such as crane pads)
 - i. Please identify the nature of any temporary works associated with a crane lift.

The DI will close out the mentorship arrangement when the evidence has been provided and when the mentor is comfortable with the experience and knowledge gained. This would typically be around 3 months subject to the nature and intensity of the project(s).

5. PROCESS

5.1 Identification of Temporary Works Requirements

The PC-TWC and any managing TWCs are responsible for the identification of all requirements for temporary works in conjunction with the discipline specific **CREs (both Design and Construction)**. The details of each specific item of work shall be recorded by the PC-TWC/TWC in the Temporary Works Register (CIV510F03). The register will be established, populated, and maintained as a live document and held in a shared environment.

Through reference to the requirements of NR/L2/CIV/003, the PC-TWC will authorize the categorisation the nature of the temporary works in terms of risk and design check. These details will be recorded in the temporary works register. Appendix B should be used to assist the decision-making process.

The risk categorization determines whether a design is required to manage the risk, or whether other suitable control mechanisms are appropriate (i.e., work package plans, manufacturer's literature). It should be noted that very low risk designs will often consist of manufacturers' literature appended to the design brief which will detail their application.

Each item of temporary works will have a unique identification reference number which will comprise the following:

- Client project number: e.g., 124119
- VolkerRail project number: e.g., EP0027
- Document Type: e.g., TMP
- Discipline: e.g., CV
- Unique number: e.g., 0000

A project specific numbering system may be used as an alternative.

5.2 Programme

The following programme requirements are to be adhered to at all times.

- All temporary works designs are to be identified in the programme.
- Temporary works designs are to be completed at AFC a minimum of one week in advance of the works taking place.
- Temporary works designs are to be based on permanent works AFC design. If a temporary works design is completed in advance of the permanent works AFC a written validation exercise must be completed to demonstrate that the designs align.

5.3 Design

5.3.1 The Design Brief

The design brief, checked by the CRE and formally acknowledged by the PC-TWC/TWC, is a key stage of the design process and overall management of the temporary works. It sets the scope for any proposed design works and enables the design requirements, considerations, and any supporting information to be clearly communicated to the designer. It should be written in conjunction with the CRE and provide a broad range of suitable information to the designer, particularly with respect to on-site interfaces and site-specific ground investigation results.

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Template CIV510F04 is to be completed ensuring that site-specific and unusual risks, interfaces, and constraints are communicated to the temporary works designer.

The detail in the design brief should be proportion to the complexities of the scheme and should avoid and information that is generic in nature.

5.3.2 Risk Categorisation

The risk categorisation of temporary works should be categorised in accordance with NR/L2/CIV/003 using Appendix B for further clarification. Risk is based on.

- VolkerRail’s organisational experience and competence.
- Consequence of failure
- Location and nature of works.
- Further clarification may be sought from the Designated Individual.

5.3.3 The Design and Design Check

The design is to be undertaken in accordance with the requirements of NR/L2/CIV/003, utilising its competency requirements for designers and its check categories for the nature of each design.

Check categorisation is based on the complexity of the design and is not to be confused with the risk categorisation.

The requirements of VolkerRail’s internal standard ENG01M004 Undertaking Designs is to be adhered to at all times.

It should be noted that very low risk CAT 0 designs (refer to Appendix B) may be undertaken by the TWC on the basis that the design utilises manufacturers’ designs. Such items are defined in NR/L2/CIV/003 and include:

- Trial pits
- Ground Investigation
- Heras Fencing
- Very low risk excavations (no plant movements, no water etc.)

The proposed Design and Check certificates will be the forms associated with NR/L2/CIV/003, however CIV510F05: Temporary Works Certificate of Design and Check is provided for instances where NR is not the client, or where the client has exercised their right not to review the design.

The PC-TWC is to engage with the client’s representative (with assistance from the CEM) to agree the submissions required for formal approval.

The PC-TWC/TWC will engage and coordinate CAT3 checking requirements where required.

5.3.4 Design Approval

Design approvals are to be carried out in line with the requirements of the contract. Agreement is to be sought from the client in respect of delegated approvals. This is to be undertaken by the TWC in conjunction with the temporary works design CRE and CEM.

The Project Manager is responsible for identifying works that are intended for commencement without TW AFC and communicating this in accordance with procedure ENG01-M012 Procedure for Commencement Prior to AFC, which will be applied to the package of work.

5.3.5 Risk Assessment

Hazards identified in the temporary works design are to be included in the risk assessment for the works. This risk assessment will detail the control and mitigation measures required to reduce the likelihood of the hazard causing harm.

The control and mitigation measures identified against significant hazards will be included in the Work Package

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Plan for the works (developed in accordance with VolkerRail Engineering Standard ENG02). Methodology from the design should be transferred to the WPP and TB documentation. Note that this should be a brief outline only.

5.3.6 Construction

This stage ensures appropriate construction controls are implemented to ensure the risks of the construction activities are managed.

These include:

- Provision of the temporary works AFC design to all relevant parties a minimum of one week before the works commence.
- The production of method statements, work package plans and task briefs which clearly define the sequencing of the operations.
- Risk assessments reflecting the residual risks identified in the TW design.
- Equipment and material checks
- The production and use of permits, and inspection and test plans.

5.6 Assurance

5.6.1 Permit to Load

The Permit to Load (template CIV510F06) is the specified assurance document in BS5975. The permit is issued by the assessing party (TWC or TWS depending on the risk classification of the temporary works – defined in appendix B) to confirm that the installation and implementation of the temporary works is as detailed in the temporary works design and aligned to the mitigation and control measures outlined in the Work Package plan.

5.6.2 Permit to Enter Excavation

Under this procedure and to recognise the specific risks associated with excavation activities, VolkerRail has introduced the Permit to Enter Excavation (template CIV510F09). This permit is the specific assurance document to be used by the assessing party (TWC or TWS depending on the risk classification of the temporary works – defined in appendix B) to confirm the installation and implementation of temporary works, providing support to all trench / excavation activities, aligns to the mitigation and control measures outlined in the Work Package plan.

5.6.3 Fitness for Use

Network Rail have a procedure of their own; NR/L2/CIV/003. This requires that a Form E be completed by the CRE or a delegated person for all temporary works designs aligned to NR/L2/CIV/003. This is an additional assurance requirement to those contained within this procedure.

5.7 Maintenance & Inspections

Maintenance of the temporary works during the period of loading is important to ensure any deterioration in performance is adequately managed and does not result in importing any additional risk to the works.

As a result, a formal inspection regime (as defined in the Design Brief) is to be implemented in accordance with the requirements of the design, as well as identifying changes in condition of the temporary works and the presence of any defects. Any defects identified are to be addressed and re-inspected.

Inspections will be recorded on the CIV510F05 following the initial permit to load sign-off.

5.8 Dismantle - Permit to Unload

The Permit to Load/Unload (template CV510F07) is the specified assurance document to be issued once the assessing party (TWC or TWS depending on the risk classification of the temporary works – defined in appendix B) is satisfied that the temporary works is no longer required to provide support to the works. The temporary works design will state where a permit to unload is required and provide the associated parameters – this detail will also be included as a requirement in the Work Package Plan.

5.9 Prohibition – Benching & Battering

VolkerRail does not allow trench excavations to be benched or battered. Trench box or shoring is the preferred solution.

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6. ASSOCIATED GUIDANCE & INFORMATION

- Appendix A - Process flowchart for the management and delivery of temporary works
- Appendix B – Risk Categorisation Table

7. DOCUMENTATION (OUTPUTS)

- CIV510F01A - Assessment and Appointment of the PC Temporary Works Coordinator
- CIV510F01B - Assessment and Appointment of the Temporary Works Coordinator
- CIV510F02 - Assessment and Appointment of the Temporary Works Supervisor
- CIV510F03 - Temporary Works Register
- CIV510F04 - Temporary Works Design Brief
- CIV510F05 - Temporary Works Certificate of Design and Check
- CIV510F06 - Temporary Works Permit to Load
- CIV510F07 - Temporary Works Permit to Unload
- CIV510F08 – Subcontractor Temporary works procedure review
- CIV510F09 – Permit to Enter Excavation
- CIV510F10 – Temporary Works Audit protocol

8. ISSUE RECORD

Issue	Date	Comments
1	08/08/2016	New Procedure
2	30/10/2018	Forms CIV510F03, CIV510F04 and CIV510F06 amended. Appendix B and D withdrawn (incorporated into procedure) Appendix C renamed as Appendix B.
3	26/06/2020	Minor amendment to Appendix B (spoil piles) and section 5.10.5 to reference the correct form (CIV510F06)
4	10/02/2022	Comprehensively rewritten to address the roles and responsibilities of the PC-TWC. Amendment to forms: CIV510F01a, CIV510F01b, CIV510F02, CIV510F03, CIV510F04, CIV510F05 New forms: CIV510F08, CIV510F09, CIV510F10 Appendix B amended

9. WHAT HAS CHANGED IN THIS LATEST ISSUE AND WHY

This procedure aligned with BS 5975:2019 Code of practice for temporary works procedures and the permissible stress design of falsework. It brings in new forms and has been comprehensively rewritten to address the roles and responsibilities of the PC-TWC.

10. BRIEFING REQUIREMENTS

All new employees will receive an introduction to the Integrated Management System (IMS) at induction, according to the nature of the role.

All employees with an email address receive the 'Record of Revisions' each month, which details changes to the IMS. All Line Managers retain the responsibility to ensure their staff are briefed on changes as appropriate.

The following table defines how revised issues of this document are briefed to existing employees according to related specific responsibilities.

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This is determined using the 'RACI' principle. Those roles identified as 'Responsible' and 'Accountable' should receive a formal awareness briefing facilitated by the Document Owner.

Discipline	Role	RACI	Type of briefing
Project Management	Project Manager	Informed	Awareness
Engineering	Project Engineers	Informed	Awareness
Engineering	Design Engineer	Responsible	Detailed
Engineering	Graduate – Civil Engineering	Responsible	Detailed
Engineering	Temporary Works Coordinator	Responsible	Detailed

Competence	RACI	Type of briefing
Designated Individuals	Responsible	Detailed
Temporary Works Coordinators	Responsible	Detailed
Temporary Works Supervisors	Responsible	Detailed
CREs	Informed	Awareness
CEMs	Informed	Awareness

11. IMS AUTHORISATION

Document owner approval:

Ben Mather, Professional Head of Civil Engineering

Senior Management Team approval:

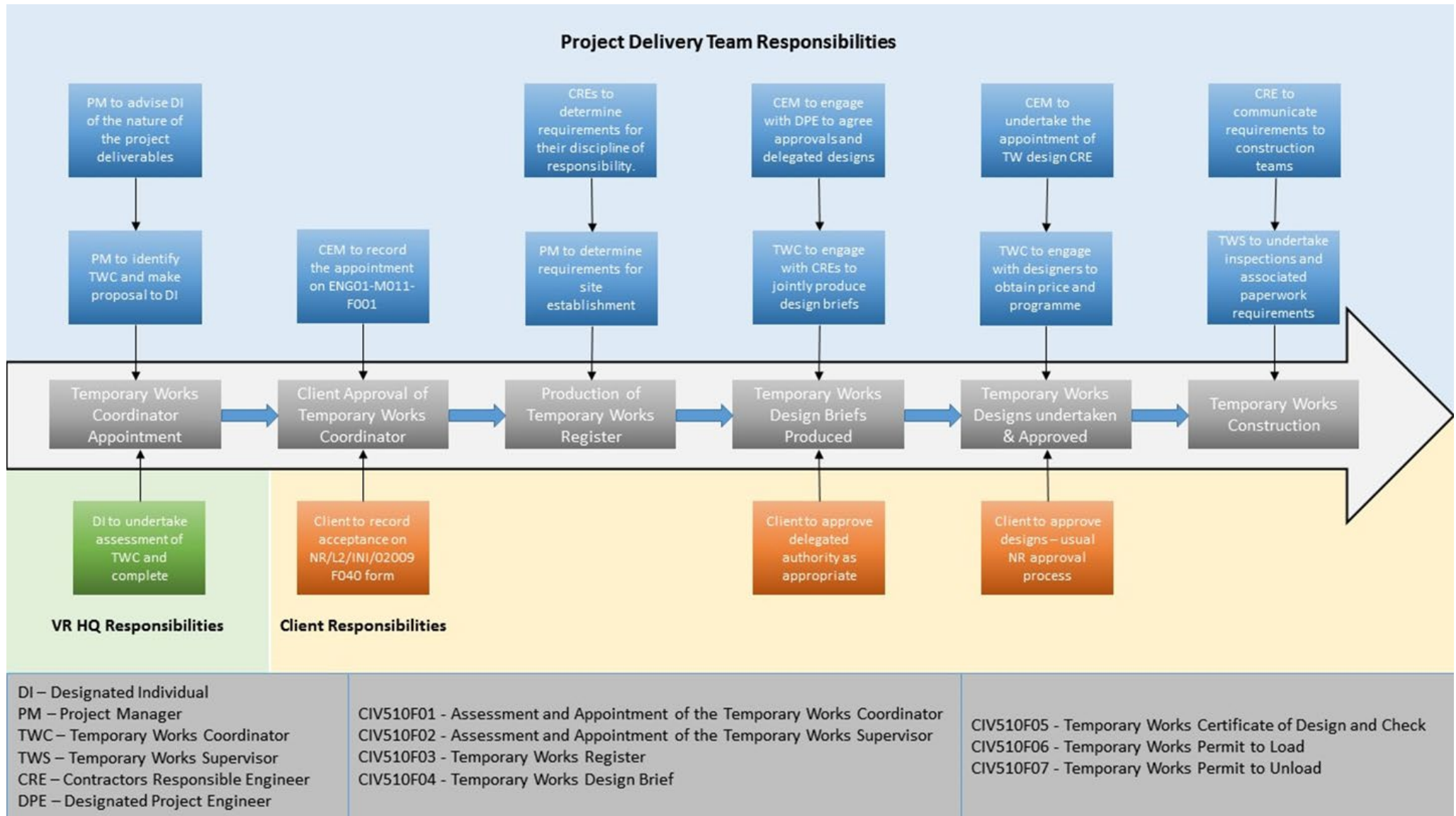


Steve Cocliff, Managing Director, 04/04/2022

Approval for IMS:

Paula Roberts, IMS Coordinator,

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APPENDIX B: RISK CATEGORISATION TABLE

Risk Category	BS5975 Risk description	VolkerRail Specific Examples (priority over CIV/003)	Design Requirements	Competency for on-site sign off	Documentation
Very Low	No identified practical mode of failure. No impact if failure occurs.	Excavations up to 600mm deep with no surcharge from material, plant, or infrastructure. Mechanically excavated Trial Pits to a maximum depth of 1.2m (no personnel entry) with no surcharge from materials / plant Exploratory ground investigation holes limited to 400mm maximum diameter and 1200mm depth. No personnel entry. Proprietary fencing system less than 2m high and over 3m from track. (i.e., Heras). Installed to manufacturer's specification incl. kentledge. Temporary pedestrian edge protection where access is restricted to persons under the control of the Principal Contractor organisation. Ground support for scaffolding, access towers, small crane lifts. Where loading is modest, and the substrate is clearly competent.	Temporary Works register entry Design details provided within Design brief.	As agreed with the civils CRE and recorded in the project specific ENG01M011F01 Form.	Work Package Plan Task Briefing Sheet Site compound inspection form where appropriate.
Low	Minor structures with high levels of robustness. Very experienced workforce. Failure is entirely within the site, of low impact. Inconvenient but personal injury unlikely.	Excavations up to 600mm with surcharging Excavations between 600mm - 1200mm depth with or without surcharging. Compounds including, haulage road, storage area, cabins etc Temporary RRAP. Temporary roads (incl. Haulage roads). Vehicle restraint systems. Non-proprietary Temporary fencing / Hoarding. Temporary fencing and hoardings greater than 2m high. Solid hoardings of any height.	Temporary Works register entry Design brief. Temporary works design (i.e. Combined Form F02/F03. Or CIV510 design Certificate)	Appointed Temporary Works Supervisor Or. Appointed Temporary Works Coordinator	Work Package Plan Task Briefing Sheet CIV510 Permit to Load

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APPENDIX B: RISK CATEGORISATION TABLE

CIV510

Risk Category	BS5975 Risk description	VolkerRail Specific Examples (priority over CIV/003)	Design Requirements	Competency for on-site sign off	Documentation
		<p>Use of standard components to catalogue design.</p> <p>Temporary Excavated slopes not exceeding 30degree incline or 2m height in free draining Soil.</p> <p>Mobile crane outrigger foundations in good ground. Crane to 50T.</p>			
Medium	<p>Conventional structures. Conventional construction methods.</p> <p>Relatively experienced workforce.</p> <p>Failure would be major, potentially involving injury, fatality, or significant economic loss. Would not initiate secondary events.</p>	<p>Excavations greater than 1200mm in depth with or without surcharging.</p> <p>Any excavations into cuttings or embankments.</p> <p>Any excavation adjacent to existing structures or within track support zone.</p> <p>Spoil piles with plant movements on them.</p> <p>Demolition works</p> <p>Piling and craneage platforms; outrigger foundations in good ground; crane exceeds 50T.</p> <p>Sheet piled walls</p> <p>Assessment of Slope stability and battered excavations surcharging weak ground arising from items of work or activities such as plant movements.</p>	<p>Temporary Works register entry</p> <p>Design brief.</p> <p>Temporary works design (i.e. Combined Form F02/F03.</p> <p>Or</p> <p>CIV510 design Certificate)</p>	<p>Appointed Temporary Works Coordinator</p> <p>Or:</p> <p>Appointed PCs Temporary Works Coordinator</p>	<p>Work Package Plan</p> <p>Task Briefing Sheet</p> <p>CIV510 Permit to Load</p> <p>Or</p> <p>CIV/510 Permit to enter Excavation</p>
High	<p>Schemes with dependency on critical structural details with little or no redundancy, or with stability reliant on critical elements,</p> <p>Schemes with complex interfaces where various</p>	<p>Any works not listed, where their failure would catastrophically affect the live infrastructure.</p> <p>Excavations greater than 3000mm in depth with or without surcharging.</p> <p>Pile and crane mats in poor ground including soft clays and loose material.</p> <p>Excavations adjacent to structures requiring</p>	<p>Review of scheme by DI</p> <p>Temporary Works register entry</p> <p>Design brief.</p> <p>Temporary works</p>	<p>Appointed PC's Temporary Works Coordinator only</p>	<p>Work Package Plan</p> <p>Task Briefing Sheet</p> <p>CIV510 Permit to Load</p> <p>Or</p> <p>CIV510 Permit to</p>

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APPENDIX B: RISK CATEGORISATION TABLE
CIV510

Risk Category	BS5975 Risk description	VolkerRail Specific Examples (priority over CIV/003)	Design Requirements	Competency for on-site sign off	Documentation
	<p>items of temporary works impact on one another.</p> <p>Inexperienced workforce.</p> <p>Unfamiliar processes or equipment.</p> <p>Failure would be catastrophic in its own right, or, if minor, might initiate a secondary or chain reaction of major or catastrophic events.</p>	<p>assessment.</p> <p>Assessment of structures likely to be affected by settlement or vibration caused by the method of work.</p> <p>Scheme reliant on the observational method or sensors and monitoring.</p>	<p>design (i.e. Combined Form F02/F03.</p> <p>Or</p> <p>CIV510 design Certificate)</p>		enter Excavation

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