### **Scaffold Awareness/Considerations**

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## Introduction

### **CDM Regulations ACOP**

#### Introduction

"The effort devoted to planning and managing H&S should be in proportion to the risks and complexity associated with the Project..... Paperwork which adds little to the management of risk is a waste of effort"

## Arranging the Work?

- "Got your number from big Smithy, I`m looking for a scaffold to go round a new block of flats down on the main street in Whitburn.
- It's a tight 3 storey building about 30m long and 20m wide and we need a couple of working platforms and a loading bay for the brickies and some access for the roofers when they start.
- Should need it for about 8 weeks and need you start on Monday as long as you`re within the budget"

## Points for Consideration

- Competence
- Temporary Works/ Design/ Ground Conditions
- Mobilisation Time
- Permits
- Delivery/ Offloading
- RA/MS/SG4/including public protection
- Individual Scaffolder Training/Competence
- Testing of Ties/ Handovers
- Modifications/ Alterations / Inspections

### Competence

- <u>CDM Regulation 4</u>: "No person shall <u>appoint/</u> <u>engage</u> a contractor unless they have taken reasonable steps to ensure they are competent"
- Safety Schemes in Procurement (SSIP); NASC; In house competence questionnaires; References and examples of previous similar work.
- How much paperwork do you really need?
- "No person shall <u>accept</u> such an appointment or engagement unless he is competent"

### **Temporary Works**

- BS 5975:2008 confirms scaffolding is defined as temporary works so Code of Practice applies:
- Appointment of Temporary Works Co-ordinator
- Preparation of adequate design brief
- Completion of Temporary Works register
- Production of Temporary Works design
- Checking of the design
- Inspection that works have been erected in accordance with the design. Permit to utilise.
- Regular inspections/ then authorisation to dismantle

## **Design Brief**

- Description (Height, Length, Width)
- Scaffold Type
- Bay Sizes/ Working Lifts
- Fully/ Part Boarded
- Netted/ Fans
- Hop Ups (1, 2, 3)
- Tie Type/ Locations
- Buttress/ Rakers

- Type of Work (Class 3 2.00kN/m2 General or Class 4 – 3.00kN/m2)
- Stairs/ Ladders
- Loading Bays & Type
- Foundation/ Ground Bearing Capacity
- Temporary Works Classification (Category 1,2 or 3)

# Foundations/ Ground Bearing

 Typical scaffold with good timber sole boards will have a bearing pressure of 290kN/m2

Do we need to improve the foundations?Type of MaterialBearing Pressure kN/m2Stiff Clay150 - 300Dense Sand/ Gravel100 - 300Firm Clay100 - 150Loose Sand/ Gravel50 --100Soft Clays50 --100

## Scaffold Design or Not?

- HSE Web Site: Scaffold Structures that require to be designed
- System scaffolds outside users guide parameters
- If deemed a standard scaffold it is potentially low risk temporary works and therefore no requirement for specific additional design and no requirement for check on the design.

# If Scaffold is designed

- Design checks will be required
- Category 1; Simple design using relevant standards, technical literature (Check by another member of design team)
- Category 2; More complex with loading calculations etc. (Check by person not involved in the design)
- Category 3; Complex sequences and innovative designs (Checks by another organisation)

### **Mobilisation Time**

#### CDM Regulation 10

"Client.... Shall ensure a minimum amount of time for the planning and preparation for construction work"

" Principal Contractor.... To ensure that every contractor is given, before he begins construction work, sufficient time to enable him to prepare properly for that work"

### **Permits from Council**

- Permission to Occupy Portion of the Road (Definition of Road includes footway)
- 4 weeks to 3 months advance notice to Council

Requirements may also include:

- Design certification
- RA/MS/ Traffic Management Plan
- Exclusion of public from area with barriers/ signs/ diversions

## **Delivery/Offloading**

- Road restrictions/ offloading to pavements
- Sufficient safe level area for offloading
- How are we offloading hiab/ telehandler/ crane.... Planned lifting operation requirements
- Checks on stability of loads prior to releasing straps
- Requirement for persons to access onto wagon
- Fall prevention/ protection needs to be assessed

## RA/ MS/ SG4

- Obtain in advance so it can be evaluated and you know what is supposed to happen/ when/ how
- Is generic RA/MS adequate for the proposed job?
- Sequence of erection/ loading up materials/ when are buttresses or ties being added/ partial handovers/ full handovers
- SG4 and proposed safe systems of work

## RA/ MS/ SG4

Don't forget about Dismantling!

- Checks on ties/ bracing/ condition of scaffold before starting to dismantle
- Clearing of platforms
- Safety zones/ signs/ no other trades on scaffold
- Sequence for dismantling
- Control of loading of materials on platforms as dismantle progresses
- Correct lowering of materials

## Scaffolder Training/ Competence

- Construction Industry Scaffolders Record Scheme <u>Main CISRS Cards:</u>
- CISRS Labourer (Labouring duties only, must not erect, dismantle or alter scaffold structures – must be in fully boarded/ double guardrail)
- CISRS Trainee (Usually referred to as a Part 1, works under the direct supervision of a CISRS Scaffolder)
- CISRS Scaffolder (Parts 1 & 2 + System Scaffold Product Training)

### Scaffolder Training/ Competence

#### **CISRS** Cards – continued

- CISRS Advanced (Basic & Complex Scaffolds)
- CISRS Supervisor (Scaffolding equivalent to the Site Managers Safety Training Scheme)

- Basic Access System Erector (Base Card; Simple system scaffold structures with limitations on height, types and locations)

 Anchors must be correctly <u>selected</u>, <u>installed</u> and, where necessary, <u>tested</u>

**Selection** 

- Type of linkage to the scaffold
- Base material/ suitability of the structure
- Working loads and how they are applied (tension, shear, bending or a combination)
- Potential for corrosion

#### **Installation**

- Installed by trained personnel, using correct tools and in accordance with manufacturer`s data
- Hole dimensions and depth are critical
- Positioning is critical. Edge distances and spacing between anchors.
- Usually locate in solid portion of brick rather than into mortar joints. If fixing in joints both preliminary tests and proof testing will be required.

Testing Anchors (as per NASC/CFA Guidance)

- Preliminary tests required wherever there is any doubt about suitability or load capacity in a base material (5 tests with anchors 2x the tensile work load i.e. 2 x 6.1kN = 12.2kN)
- Proof Tests required on almost all anchors. Anchors to be specifically identified and recorded and tested to a load 1.5x the tensile load. (i.e. 6.1kN to a test load of 9.2kN)
- Testing by competent person, test meter calibrated within 12 months. Minimum of 3 anchors tested and at least 5% of the total job.

#### <u>Handover</u>

- Anchors which have been tested should be clearly identified. Preferably on the anchor and the scaffold drawing (if applicable)
- Handover certificate to include types of anchors, total number of ties, number of tests.
- Test results and certification included along with the handover
- The handover process should usually have an issue and acceptance requirement

## Modifications/ Alterations/ Inspections

- Agree instruction process for the authorisation of modifications/ alterations
- Who is authorised and competent for carrying out this work? Scaffolder/ Base Card/ Hop Up training operatives??
- Having a poor process for modifications usually results in unauthorised adaptions by the usual culprits (brickies, rough castors, roofers etc.)
- Major alterations should usually lead to a new or amended handover certificate

## Modifications/ Alterations/ Inspections

#### **Statutory Inspections**

- Carried out by competent person.

#### <u>3 Options</u>

- DIY, Inspection by Principal Contractor/ Hirer
- Scaffold Contractor, although most not comfortable with doing this.
- Independent Consultant/ Specialist

<u>Note</u>: The duty to inspect can be delegated, but the legal responsibility is retained with PC/ Hirer

**Scaffold Considerations** 

Questions/ Answers/ Discussions/ Disagreements or is it time for ?













## Safe Footing?



## Safe Footing?



### Overloaded?



### Hop Ups









