

Excavations and Work at Height

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Jan explained that he is a Structural Engineer by trade and that he is often called in in special cases where his expertise/specialism can be used.

Jan began by thanking BHSEA for the invitation to come back again to BHSEA. The purpose of this second visit is to update Members on two other important topics for Safety Officers involved with construction activities, these topics being scaffolding and excavations.

Jan showed us a number of slides (some from Australia), and challenged Members present to ask themselves four key questions in looking at the picture on the slide see slide number 2 on website www.bhsea.org.uk

- Q) **Can anyone fall from the scaffold?** (edge protection, full platforms)
- Q) **Can anything fall from the scaffold?** (toeboards, full platforms)
- Q) **Can the scaffold fall?** (bracing, tying, foundations)
- Q) **Is there safe access and egress?** (stairs, ladders tied)

Jan commented that it is always easier to put up a proper scaffold in the first place and that sometimes what looks good on the outside can be a mess when you delve a bit deeper.

Problems often occur when the Client asks for the job to be modified in some way. The workers on site just make the modification without checking first.

Non-Standard Scaffolds:

Such scaffolds should have a competent designer appointed and a design produced. Jan showed us, by way of an example, a wedding marquee with a purpose built scaffold underneath to provide support and to accommodate a slope in the ground. The scaffold eventually collapsed. It was found that there was no bracing to prevent sideways movement. It spoilt the wedding in the UK and the honeymoon in the Seychelles!

The Nature & Extent of HSE Investigations:

Referring to a particular incident in which a fatality occurred when the corner of a scaffold collapsed, Mark Hoare asked how long the investigation took to complete. Jan said that the investigation lasted 5 weeks in total. Time had to be spent going through the debris and gathering information to build a picture of how and why it happened. This particular accident occurred in April '06. The inquest took place at the beginning of '08, and lasted 2 weeks. Jan added that the medical evidence took a day to hear because the fatality occurred as a result of an embolism and not directly as a result of the scaffold collapse. A guilty plea was entered and the Principal Contractor admitted that they had got it totally wrong and the managing director acted honourably in paying the inquest costs.

Excavations - What Can Go Wrong?:

Jan went on to consider what can go wrong and why it can go wrong. Typically, it's things like:

- **Culture/habit/long standing bad practices**, "We've always done it like that...."
- **Excavation instability and the collapse of materials**. Jan added that every trench will collapse eventually, whether it's clay or sandy soil, and digging a trench close to a wall will make both the wall and what's underneath it unstable.
- **Perception**. Site operatives don't appreciate the danger they're in.
- **HSE and enforcement expectations**. In days gone by, people worked to the 4 foot rule. Thinking has changed and a competent person, e.g. an engineering geologist can make an opinion about the stability of the soil. (As we know, fatalities can still occur, even when an engineering geology company is doing the digging!).

Bomb Damage WW2:

Jan referred to damage to buildings and ground works which occurred as a result of the bombing which took place during WW2. Records are kept particular of the major cities such as London, Birmingham and Coventry which were heavily bombed. Mark Hoare mentioned the fact that bomb damage was an issue when some work took place recently at the University of Birmingham.

Gerry Mulholland reminded Members of the current trend in Central London for buildings to be extended up to two storeys underground. Members went on to discuss the freaky nature of some of the fatalities we see i.e. the wall collapses just as the child is passing, and the difficulties experienced by the Client who is not a competent scaffolder/excavator and who has to rely on the contractor to make sure that work is carried out in accordance with legal requirements.

Planning Authority:

A question was raised about the local Planning Authority and the potential for their input to any of the slide examples given. Jan replied that the Planning Officer does not normally get involved. Building Inspectors will check the

foundations, and if there are issues, the Inspector can contact the HSE. Jan commented that it is always helpful if the Building Inspector speaks to the Client first of all.

In response to a question about the application of the Building Regulations, Jan advised that since the wall (in the example given and shown on the slide - see slide 67 to 72 on BHSEA website), wasn't attached to the building, then Building Regs didn't apply. (The MP has raised this matter in the House of Commons). Moreover, there were also internal structural alterations carried out that should have had Building Regs approval. However these weren't notified and so the Building Inspector didn't visit the site in this particular case.

Mobile Towers:

Jan said that he doesn't normally get involved unless the tower falls over. Although he had been involved in a court case in which a light bulb was being changed in a sports hall. The operative had been trained, but he did not apply his learning.

Recent Changes to RIDDOR:

George Allcock asked whether, in Jan's opinion, the recent changes to RIDDOR will improve the level of reporting. Jan said that he feared that the relaxation in the 3-day reporting requirement will result in fewer incidents being reported. Gerry Mulholland commented that dangerous occurrences represent an opportunity for learning, and yet people are fearful they will get blamed. We could therefore conclude that a lower reporting level means fewer learning opportunities. George challenged BHSEA Members to stand up (maybe in one of our Members' Corner sessions), and discuss their own experience and the learning opportunities it presented to the organisation.

Excavations and Technology:

Gerry Mulholland asked about the impact on incident reduction of new technology e.g. trench/drag boxes. Jan said that trench boxes were good although issues such as not being used properly and insufficient boxes used to provide full and proper protection. Jan added that there are plenty of different types of equipment to provide trench support and it is not necessarily *that* expensive.

CDM Update:

Jan told us that at the moment the Regulations are being considered for their regulatory impact assessment. The Regs have been there for a month and should be available in the Autumn for consultation. The aim is to get them finalised in 2014 – probably October.

For the full and comprehensive detail of the presentation given today including slides, please refer to the BHSEA website www.bhsea.org.uk

Gerry thanked Jan for his excellent presentation which was brought to life by the photographs shown and the informative case studies. Gerry thanked the HSE generally for the support they give to BHSEA and its Members.