



## Federation of Piling Specialists

### Guidance Notes on PUWER 98 Regulation 28 – “Self Propelled Work Equipment”

There have been occasions recently where Principal Contractors have raised queries regarding PUWER Regulation 28, which states:

*Every employer shall ensure that, where self propelled work equipment may, while in motion, involve risk to the safety of persons -*

*(e) Where the driver's direct field of vision is inadequate to ensure safety, there are adequate devices for improving his vision as far as is reasonable practicable.*

**Explanation of terms:** By “self propelled mobile work equipment” in this context we are referring to crawler cranes, hydraulic piling rigs, crane mounted piling rigs and attendant excavators. The phrase “so far as reasonably practicable” has a specific meaning in safety management. It means there is not an absolute requirement, but that an assessment must be made, balancing the practicality and expense against the benefit to be gained and an optimum strategy adopted.

Some Clients have interpreted Regulation 28 to mean that secondary mirrors or CCTV must be provided to ensure the driver can see to the **rear** of his piling rig or crane. This is an interpretation that we consider fails to manage the risk adequately for the following reasons.

- Secondary mirrors or CCTV would only provide a limited field of vision to the driver with poor depth/distance perception and unacceptable blind spots.
- By providing a false sense of security, drivers might be tempted to reverse in the absence of their banksman resulting in a poorly controlled manoeuvre with added risk.
- The provision of devices cannot assure their use whereas the presence and use of a banksman can be readily verified by our site supervision.
- A specific and essential role of the banksman is that of co-ordination of activities between the piling rig, service crane, attendant spoil excavator and any other nearby personnel and plant. He cannot be dispensed with, allowing movement to rely on vision aids alone, in view of these other essential duties.

It is the considered view of the FPS Safety and Training Forum that safety of persons and property in the vicinity of cranes and piling rigs is best assured by the provision of an attendant banksman trained to CTA/CPCS standards as a signaller/signaller. It should be borne in mind that heavy piling plant and service cranes move at less than walking pace.

The use of a banksman is a tried and tested piling industry standard practice, and is an essential control in any piling machinery movement.

A further consideration is where there is simultaneous movement of several items of plant in a confined area where co-ordination is vital. This is an area where a banksman or banksmen are essential to the safe movement of plant and use of mirrors or CCTV could be a hazard in themselves.

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We do accept the use of side mirrors to improve the field of vision along the sides of excavators. Similar to a road vehicle, these can provide a valuable improvement in driver's vision.

The Principal Specialist Inspector of the HSE Construction Division has written on this subject and made the following pertinent points:

- The HSE are looking at the overall approach to site transport under three headings: Safe Site (pedestrian segregation, site layout, roads and storage areas), Safe Driver (training) and Safe Machine (plant selection, maintenance).
- HSE expect specialist operators to undertake risk assessments based on their expertise and experience of the plant and system of work.
- Blanket rules have their uses, but they must not overlook specific risk issues.

The HSE has also issued an Approved Code of Practice (ACOP) for the PUWER 98 Regulations. This ACOP makes the following points.

- 1 The risks from this equipment are caused by either the movement of the machine when tracking or slewing or by movement of the load. The main persons at risk are pedestrians on site, either from being struck by the machine or its load.
- 2 The Client is reminded of his responsibility under Regulation 15 of the Construction (Health, Safety and Welfare Regulations) 1966 that pedestrians must be segregated from work areas. Paragraph 45 of the ACOP reinforces this by requiring that pedestrians be kept away from work equipment. Under the FPS/HSE PUWER guidelines, the piling contractor is also required to ensure an exclusion zone is established around the piling area from which other persons are to be excluded by the banksman.
- 3 Paragraph 268 of the ACOP supports the use of “systems of work” to ensure safety where the position of the operator means that he cannot be sure nobody is at risk. The ACOP gives as a specific example of such a “system of work” the use of signallers to crane drivers.
- 4 Paragraph 370 of the ACOP, which discusses “drivers field of vision” concludes by saying the selection of devices is a matter of risk assessment. It is our analysis of the risk that leads us to use attendant banksmen as the control measure rather than physical devices.

### **Federation of Piling Specialists**

Forum Court  
83 Copers Cope Road  
Beckenham  
Kent BR3 1NR

Tel: 020 8663 0947  
Fax: 020 8663 0949  
email: [fps@fps.org.uk](mailto:fps@fps.org.uk)  
website: [www.fps.org.uk](http://www.fps.org.uk)