Balfour Beatty should have waited for right plant

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The Balfour Beatty employee who was fatally injured while repairing a central reservation barrier on the A2 was using inappropriate equipment after being left without clear instruction, according to the inspector who led the Health and Safety Executive (HSE) investigation.

The Balfour Beatty worker was crushed to death by a lorry-mounted crane while repairing a central reservation barrier | Image credit: HSE

As we reported on 27 January, crews from Balfour Beatty Civil Engineering and subcontractor Littlewood Fencing were deployed on 1 October 2012 to repair an Armco barrier that had been hit by a beer lorry. They were also clearing up the thousands of beer cans on the carriageway, removing debris and setting up temporary traffic management systems.

The repair work involved replacing concrete-mounted steel posts which supported the damaged barrier. The posts had become detached from their foundations in the lorry collision and this complicated the task.

"It's relatively easy to get the posts out of the ground when they're intact," said HSE inspector Andrew Cousins. "You use a camlock which grips the post and the concrete footing and pulls it out in one piece. But when a post snaps off … there's a large piece of concrete in the ground which you need to get out so new concrete can be poured in to set the new post in place."

The team was preparing to use a large excavator to dig up the block of concrete. This would have been appropriate for the task, but it exceeded the towing vehicle's maximum weight capacity and so could not be delivered to the site. A smaller, 1.5-tonne excavator was deployed but it "wasn't man enough" for the task, said Cousins. He explained that rather than downsizing the excavator to meet the requirements of the tow truck, a larger truck should have been used to tow the big excavator.

The team then decided a Palfinger PK 15500 lorry-mounted hydraulic crane might be able to remove the footing. The crane operator used the crane's jib to push and pull the concrete block and loosen it from the ground before chains could be wrapped around to lift it free. "That operation is inherently

dangerous," said Cousins. "It was an articulated crane and not intended to be used as a device for pushing and pulling things."

The crane slipped while it was forcing the concrete block back and forth and swung around at full speed. Larry Newman, who was standing in the danger zone ready to fit the chains, was crushed between the jib and an outrigger and died instantly.

Balfour Beatty was fined £1m, which must be paid within two months, when it appeared before Canterbury Crown Court earlier this month. "The new sentencing guidelines come into place on 1 February … and the judge chose to pay regard to these principles," said Cousins. Despite Balfour Beatty's claims it made a large loss recently, "she wasn't convinced that there was an inability to pay and decided a substantial fine was appropriate in order to bring home the message that companies need to take their responsibilities very seriously," he added.

The starting penalty was £1.5m but the company was given credit for admitting its failings under Section 2(1) of the Health and Safety at Work Act. However it initially refused to accept the Section 3(1) charge, maintaining that only its employees were in danger at the time of Newman's death.

"We were not convinced by that, the judge was not convinced by that and the evidence didn't say that. This unsafe action had been going on for many months … both employees and nonemployees were being exposed to danger," Cousins explained. Severe damage to the lorry-mounted crane indicates it was being used incorrectly for a period of time.

Though Balfour Beatty now ensures the use of larger excavators for this type of work, the HSE inspector told *IOSH Magazine* that the changes were not implemented quickly enough: "Even after a tragic fatality it still took them seven months to come up with a safe system of work," he said.

Training also was improved following the incident. The industry standard training given to all onsite workers only covered the installation of new barriers; repairing barriers, which involves removing damaged sections prior to fitting new ones, was not included.

"The workers hadn't been given any clear instructions by their managers. There was no safe system of work, no risk assessment had been done for it and the guys were just left to their own devices," Cousins concluded.