Sharing Lessons Learnt

RIDDOR at Redhill Platform 0

20 January 2017

As part of the construction of the new platform, 60 kg Expanded Polystyrene (EPS) blocks were being lowered using a 25Te 360 excavator to their point of installation at a lower level. During the lowering operation, one of these blocks rolled forward from the excavator's bucket striking an individual on the head and knocking him to the ground. The individual sustained three fractured vertebrae as a result.

Key learning point

The individual was standing in an unsafe area adjacent to the lifting operation. Always ensure an effective exclusion zone is in place and being effectively managed and that loads are secure before lifting.

OTHER KEY LEARNING

- **Works were considered long in advance of activity taking place on site. The planning involved the general foreman and site foreman as well as site management team prior to WPP & TBS being prepared; however, insufficient consideration was given to the lifting methodology to be used.** Always draft a detailed lift plan and consult appropriately qualified individuals e.g. designers, lift planners, construction managers. Assess the risk and if a significant one exists make sure you mitigate it before the works commence.
- **The material supplier did not have any installation guide or offer any advice on how the product should be lifted. The product is available in sections up to 190kg in weight (maximum weight of sections being used at Redhill was 60kg).** Always ensure a suitable lifting plan is drafted, consulted and approved before commencing works. Conduct a suitable and sufficient risk assessment and ensure all foreseeable risks are managed effectively by seeking competent support and advice.

Never enter the agreed exclusion zone, unless directed to by the person in charge.

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OTHER KEY LEARNING CONTINUED

- **The lifting methodology for the EPS blocks was not discussed with the temporary works designer or the principal designer. The site team did not deem there to be a requirement for designer input as the material being used was not specialist in nature.** A thorough detailed lift plan should have been drafted and designers consulted for advice.
- **Previous methodology of installation of similar materials was accepted as being sufficient. This was not examined in sufficient detail to determine if it was the best possible methodology to be used for these works.** Just because a task has been conducted before, do not assume that it is safe. Fully review the task in a step by step nature looking at all the risks that could occur and mitigate each stage to ensure it is safely conducted.
- **Some of the risk control measures within the TBS were not specific enough, using words such as suitable or sufficient. This is acceptable for WPP stage but needs greater clarity within the production of TBS.** Any ambiguities or areas which are open to interpretation are to be fully explored prior to drafting the TBS; generic text should not be used. Get the staff involved that do the task and identify hazard and mitigation measures that will be implemented at site to reduce the risk to an acceptable level.
- **The WPP/TBS stated that a lift plan was to be in place. As the polystyrene blocks weighed 60kg which is well within the lifting capacity of the machine, it was deemed to be acceptable that the lift plan for miscellaneous loads under 2Te was sufficient by the site team including the CRE and lift supervisor (general foreman). The size of the blocks was not considered in sufficient detail. The number of lifts (approximately 250 EPS blocks) scheduled to happen should also have prompted a detailed review of the lift process and a specific plan for the EPS blocks being entered into the lift plan.** No review of the lift plan was undertaken by the lift supervisor in specific relation to the lifting of the EPS blocks. It should have been reviewed. It is easy for staff to opt for using miscellaneous documents rather that create one for the specific task. Cutting corners to reduce effort does not save you time, always spend a little more time drafting good documentation for the task.

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OTHER KEY LEARNING CONTINUED

- **It was not possible to orientate the machine any way other than that used due to the site restrictions (hoarding and bridge parapet). This resulted in the excavator slewing round with the arm on the side of the direction of slew. This created a blind spot for the excavator operator. The additional risk due to the blind slew was not considered within the WPP/TBS or RA.** Always consider new risks due to location of plant and identify impact and mitigate the risk. Also consider sizes of machines to be used – a smaller machine may have been better in this case and this should have been considered at the planning stage. The blind spot should have been risk assessed and mitigated.
- **Although the paperwork and briefings stated that there was to be an exclusion zone in place during the lifting operation, the exact exclusion zone was not specified. This could have been done either through a radius from the lifting operation being specified or by designating a specific position of safety during lifting operations. There was no process documented within the TBS for identifying when it was safe to move back in towards the machine. This element was therefore left to the site foreman to determine on site.** Always ensure everyone is clear on what the exclusion zone is and when you can enter it. Ensure effective supervision, management and control of lifting operations at all times.
- **Due to the WPP/TBS referring the lifting operation to the lift plan and the lift plan not being specific to the EPS blocks, there was no detail on the lifting methodology being used, simply a reference to the blocks being lifted within the bucket of the machine. The orientation of the excavator bucket was not specified and it was not stated whether any straps, etc. were to be used to keep the EPS block in the excavator bucket.** When you need to carry out a task make sure you fully understand how it should be done. Make sure the lift plan is clear and that a suitable risk assessment has considered the risk and mitigated it.
- **Following the accident, the injured person's hard hat was examined to ensure that it was in date and to check if there was any sign of damage which exacerbated the injuries received. It was found that the IP was wearing a hard hat winter liner which had been issued to the individual by BAM Nuttall; however, the winter liner was not inserted into the hard hat correctly.** If you issue hard hat winter liners ensure they are the correct type for the helmet and that there are suitable instructions on how to fit it. Employees are required to train staff on how to use PPE. The helmet liner would be deemed as part of the individuals PPE and you should consider what training you will provide to the end user. You are legally obliged to provide suitable training to your staff.