

MAJOR INJURY



Whilst installing minipiles on a project at London Bridge redevelopment a Bachy Soletanche employee working within our Specialist Geotechnics team sustained a crush injury to his left hand which has resulted in a Major RIDDOR reportable accident

What did the job entail?

BSL were installing minipiles under the archways at London Bridge Redevelopment project. Using cased auger drilling techniques, drilling was undertaken by a Hutte 205 rig. The IP (injured person) and the rig operator had been working together for over 3 months carrying out this task. The crew split down into two teams, one team operating the rig with the other in attendance, supplying cages, casings and augers.

How did the accident happen?

The team were in the process of installing the 9th auger in a sequence of 28. The rig gates were opened and a flight auger had been lifted onto the 8th auger by the rig winch. The pile arising's from the previous flights had not been removed. Once the flight auger was in position the operator lowered the duplex head to engage the 9th auger. The IP climbed onto the pile arising's and waited for the head to fully engage so he could insert a retaining pin to fully secure the auger. At this point there was a breakdown in communication between the rig operator and the spanner man. The rig operator was still in the process of lowering the head however the IP believed that the operation had been completed. The IP had placed his left hand on the top flight of the auger and was bending down in order to locate the retaining pins. The skirt of the duplex head was lowered onto his left hand trapping it between the top flight and the skirt.

Why did it happen?

The operation for connecting and augers and inserting retaining pin had been carried out over 3000 times during a 3 month period. Although the hazard of entrapment had not been identified on the risk assessment both the rig operator and the spanner man individuals were fully aware of the potential.

B A C C H A T S A F E T Y A L E R T .

The IP was stood directly next to the auger on top of the pile arising in anticipation of the head engaging in order for him to insert the retaining pins. As the duplex head engaged there was no reason for IP to be stood so close to the moving machinery. The rig operator should not have allowed anyone to be stood so close to the moving parts. The working environment inside the guarding and around the casing was not a suitable or stable working platform. The spanner man was required to stand on the pile arising's which were uneven underfoot and also placed his chest, shoulders and head above the connection point. When stood at this point there was a need to bend down or stoop in order to insert the retaining pin. Due to the uneven ground this may have led the IP to place his left hand on the top flight in order to steady himself to enable him to insert the pin.

The rig operator and the IP had been working together for over 3 months so there was a possibility of complacency creeping in. This complacency along with a breakdown in communication led to the accident occurring.



Hand resting on the top flight as duplex lowered onto the next auger



Buildup of spoil leading to uneven ground conditions

What have we done?

Following the identification of potential entrapment between the skirt and the flight auger, engineers have re-designed the duplex head. The stem of the head has been lengthened and the skirt has been reduced by 50mm, this completely eliminates the potential of entrapment of hands or other body parts.

What can you do?

Rig operators: Remember to be aware of your surroundings at all times, know where each member of your team is located. Do not allow individuals to move or stand too close to the rig as it is operated. Talk to your team members to ensure they know what you are doing or about to do.

Front men: Talk to your rig operator, ensure you are fully aware of what stage in the process they are at. If you are required to move in towards the rig, signal to the operator and then do not move until you are sure he has received and understood your command.

Supervisor: Remind the operators and front men of their roles and responsibilities. Monitor the crews to ensure that there are good levels of communication. Give each crew feedback on ways to improve communication.