

Key Lessons

Cable Strike

Date of Incident: 2016-08-31

Site: Bardon Hill, Asphalt

Country: United Kingdom

Main hazard/ Risk: Other

Description of Event:

In order to set up a mobile plant crushing operation, a contractor was preparing the work site by grading the area using an excavator. At around 10:30am whilst undertaking this task the contractor reported to the Site Supervisor that they believed a water pipe had been struck by the excavator bucket. The Maintenance Supervisor went to assess the area and noticed a sand bed in the area they were preparing and witnessed water pooling, so they immediately ceased operations to allow a further assessment of the situation.

At 11:15am power to Bardon Hill quarry was lost and contact made with Western Power for further investigation. Power was re-instated at 12:15pm to most of the quarry complex, but there remained three areas where power was still down. Western Power then re-set the trips within the substation panels and on the third attempt (standard operating procedure) a loud noise was heard outside. On investigation they found an 11kv cable had blown in the recycling area that had previously been assessed for the water pooling issue and it was established that this cable was the power supply to the aforementioned areas of the site. The area was immediately zoned off and operations suspended. ABB contractors arrived on site at 6pm to complete repairs to the damaged cable, after making the area safe, and power was restored at 00.45am on 1st September.

Key Observation:

The contractor in question was leveling the area prior to siting of the mobile crusher/screening unit, but in doing so unknowingly went to a depth that by Aggregate Industries' standard, would have been deemed as excavating and not leveling. Furthermore this was not understood by on site management, therefore, the applicable safe systems were not deemed necessary.

The contractor involved is experienced in recycling production and regularly undertakes this operation on several of our asphalt sites.

Photographs:





Key Lessons after Incident Investigation:

Please provide details on the root causes identified during the Incident Investigation. Corrective and preventive measures that have been/will be designed to prevent similar failings from recurring in the future and resulting in similar incidents.

Root Causes	Category	Corrective and Preventive Actions
Reference to Datum Points	3. Management System	Ensure all working areas including recycling zones have fixed datum point(s) clearly identified
Underground services diagrams are for reference only	4. Culture, Perception and Beliefs	In line with HS20 and make sure all areas used for crushing activities have been surveyed.
Permit should be issued at a depth below 150mm	3. Management System	Review activities when setting up mobile plant for crushing / screening.
When planning the setup of mobile equipment, ensure the Risk Assessment/ Method statement cover the ground conditions and the requirement to grade/ correct the levels	4. Culture, Perception and Beliefs	Review with principal contractors used for crushing activities and include learning points from this key Lesson document.
Communication and interaction between the contractor and site management	4. Culture, Perception and Beliefs	Review through daily / start of shift discussions

1. Physical Conditions Examples include: Controls, Visibility, Upset Conditions, Noise/Vibrations, Equipment Facility design, Warnings, Environment

2. Human Factors Examples include: Cognitive, Psycho-Behavioral, Physical/Mental Limitations, Perceptual, Self-imposed stress, Personnel

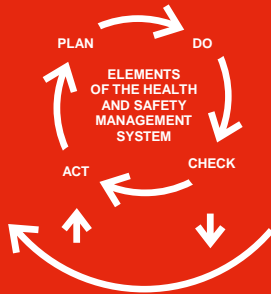
3. Management System Examples include: Training, Accountability, Communications, Planning & Evaluation, Rules and Procedures, Supervision, Incident Investigation

4. Culture, Perception and Beliefs Examples include: Risk Tolerance, Visible Leadership, Employee Engagement, Value for Safety, Norms, Drift, Goals



Communication Principles

- Determine a country wide process for distribution of this document, including appropriate corrective actions for all levels of the organization.
- Communication should include discussions in Team Meetings, Toolbox Talks, posting on Notification Boards, email distribution, and developing and sharing relevant action plans



Important Actions

- Perform a gap analysis based on the information in this document.
- Establish the action plan including objectives and processes necessary to ensure a similar incident will not occur at your sites.
- Implement the action plan, execute the process, close the gaps.
- Collect data to track implementation until completion