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| **Topic** | Safer production |
| **Entry number (MPA Ref)** | 202498 |
| **Title of Entry** | Crusher access single level platforms. |
| **Name of Company** | CEMEX UK |
| **Location** | Pyford Brook Quarry |
| **Video**  **(if yes, please include URL for video)** | no |
| **Other resource X (if yes, please include description)** | 5 x images |
| **BACKGROUND** | |
| The company suffered a series of accidents and incidents related to crushers, where multi-level configurations played a significant role. These structures either directly caused incidents or exacerbated the severity of injuries sustained. Recognizing this, we prioritized eliminating multi-level designs around new install crushers. Additionally, simplifying access around crushers enhances maintenance and inspection processes. | |
| **MANAGEMENT OF PROCESS** | |
| After conducting root cause analyses on previous incidents within the UK aggregates operation, the quarry teams identified a recurring issue: crusher areas particularly in older plants, were plagued by multiple levels and obstructive structures. These structures included the crusher frame, lubrication tanks, motors, cables, and pipes, all of which posed significant trip hazards and made maintenance challenging. Additionally, slips, trips, and falls were difficult to mitigate due to these obstacles.  During the design phase for the new plant at Pyford Brook, the management team took these findings into account. Their solution was to create a single-level area around the crusher, allowing 360-degree access. This design improvement facilitates inspection and maintenance activities, whilst eliminating hazards associated with multi-level configurations. | |
| **BENEFITS** | |
| **A single-level access to a crusher is essential for safety, efficiency, and maintenance reasons. These are the benefits:**   1. **Safety**: Having a single-level access ensures that operators and maintenance personnel can move around the crusher without encountering steep steps, uneven surfaces, or multiple levels. This minimizes the risk of slips, trips, and falls, especially in busy work environments. 2. **Efficiency**: Single-level access streamlines operations. Operators can quickly reach critical areas such as the feed hopper, discharge chute and control panels. This reduces downtime and allows for smoother material handling. 3. **Maintenance**: During routine inspections, repairs, or component replacements, a single-level layout simplifies access. Maintenance crews can easily reach all parts of the crusher, including wear liners, bearings, and belts. This promotes timely servicing and prolongs equipment life. 4. **Accessibility**: A single-level design accommodates equipment such as cranes, lifting devices, and tools. These are essential for tasks like changing crusher liners or addressing mechanical issues. Having unobstructed access ensures efficient maintenance and prevents delays.   In summary, a single-level access design for crushers enhances safety, operational efficiency, and maintenance effectiveness. | |
| **INNOVATION** | |
| Our approach is rooted in the ERICP principle: by eliminating common hazards around crusher installations, we can significantly reduce the likelihood of slips, trips, or falls. This standard has been embraced in all our new installations moving forward, resulting in substantial enhancements to workplace design. | |
| **DEVELOPMENT & TRANSFERABILITY** | |
| The single-level design concept can be extended to other areas of process plant design where access is restricted or obstructed. It should serve as a specific design criterion for new plants during the design and 3D modelling phase. This approach has already been shared within the business and could potentially benefit the entire industry | |
| **NB if document has embedded images try and include these**  **If other documents provided say additional information available.** | |