# Fatal incident involving a contractor on cement plant

## WHAT HAPPENED

Repairs at a cement plant, following a major flood, included the replacement of sections of a large kiln. The work was being carried out by a mechanical engineering company, with the support of a kiln installation contractor, who were engaged to provide an on-site specialist engineer for technical advice and quality control. This specialist was accompanied by a second engineer, who was familiar with work on cement mills but was keen to gain experience in kiln installation and maintenance work.

Prior to lifting out the old kiln section with a mobile crane, the mechanical engineering company created an exclusion zone and cleared the area of all ancillary personnel, which included the second engineer.

A short time later the engineer used a stairway and gained unauthorised access to the adjacent kiln building roof, having passed over or through a handrail.

Tragically the additional weight of the engineer caused a section of the roof to give way and he fell to ground some 18 metres below; he died at the scene despite efforts to revive him. It is believed he had intended to take photographs of the lifting operations.

## LEARNING POINTS / ACTIONS TAKEN

The engineer was competent and experienced in cement plant construction, installation and maintenance and his company had provided training for working at height, however his competence was not reviewed on his arrival to site: Do contractor checks include an assessment of the competency and experience of personnel, in relation to the activities being carried out and the likely risks? Are any knowledge gaps addressed by further training or additional control measures?

The engineer received a site induction from the Principal Contractor controlling the site, which included the procedures and the control measures to be followed when working at height: Are induction standards monitored? Does induction training include site specific hazards and risks, including restrictions on work at height and appropriate information relating to fragile roofs? Do inductions provide information on designated access routes to work areas and limitations on access to unauthorised areas? Are restrictions on the use of devices such as mobile phones and cameras, which can cause a distraction, explained? Are checks made to ensure induction requirements are understood, with any misconceptions being addressed?

All higher risk work on the project is controlled under Permits to Work, with all roof work requiring a special permit. There was no planned work on the roof where the incident occurred and therefore no Permit had been issued to access the roof. Are the requirements for Permits to Work clearly defined and does training include the procedures to follow when tasks change? Is all roof work carried out by appropriately trained contractors, authorised by Permits to Work, that specify the necessary precautions in accordance with a hierarchy of control measures?

The contractor went onto the roof by climbing over or through a handrail / barrier which was restricting access, there was however no ‘Fragile Roof’ warning signage in the area: Do barriers comply with required standards? Are adequate signs posted indicating access restrictions or warning of dangerous conditions, such as fragile roofs?

Previous structural surveys of the roof didn’t identify any defects. A programme of roof repairs had been progressed over the past few years. Are structural surveys carried out regularly? Do they report on the general condition of structures as well as listing defects that require immediate attention? Do surveys highlight issues that may

affect personal safety?

Risk assessments are carried out at the site for specific working at height tasks, including all roof work. A working at height risk assessment had been carried out for the kiln repair task as it required the removal of a section of a roof on the adjacent kiln building, however the general workplace risk assessment did not consider work at height: Do all sites have general workplace risk assessments for all activities involving working at height and include those areas which are infrequently used or rarely accessed? Is access to areas of high risk prevented or controlled by the use of barriers, gates, signs, etc.? Are high risk areas that have been identified in structural surveys, hazard alerts or other reports considered in the risk assessment?

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| **LOCATION:** | **CEMENT PLANT** | **ALERT STATUS:** | **Normal** |
| **ACTIVITY:** | **ACCESS & EGRESS & WORKING AT HEIGHT** | **DATE ISSUED:** | **07/08/2014 11:13:37** |
| **SUB ACTIVITY:** | **N/A** | **INCIDENT No:** | **00386** |