

Safety Alert 25-105 - Near Miss - Drilling through floor into a HV Switch Room

A structural survey was to be completed by a specialist contractor to understand the structure of the building and loading capacity of the ground floor above for the installation of the new MCC and pumps. The specific activity for the day was to ascertain beam make up and sizes.

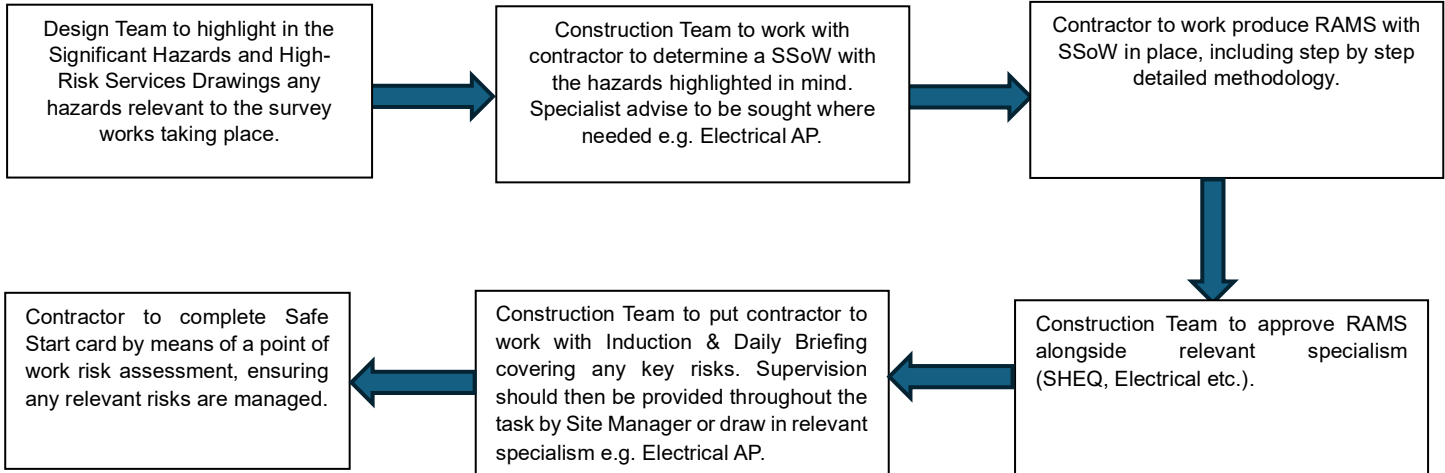
An operative had successfully completed several drillings earlier in the day as part of the survey but whilst the final drilling was completed at the correct location, it was at an incorrect angle, causing him to drill through the HV Switch room floor above. There was no damage to asset or people. The operative continued to carry out further drillings following this.



Left – Drill location underneath HV Switch Room Right – Drill location within HV Switch Room

| Information obtained during the investigation | Key Lessons Learnt |
|---|---|
| The RAMS were not sufficient for the task and did not account for the HV switch room with suitable controls measures in place | RAMS should be thoroughly reviewed by a competent person prior to works recommencing ensuring they contain detailed step by step methodology and all of the relevant hazards are included and controlled. |
| Lack of Supervision for the task | Project team to liaise with Electrical AP's or relevant specialist expert to discuss suitable supervision arrangements for intrusive works where specific risks are present. |
| Scope of Works/ Specification Drawings not containing relevant hazards. | Ensure Significant Hazards and High-Risk Services Drawings are in place for working inside existing buildings where the buildings contain significant hazards such as HV, Chemicals/Fuel, DSEAR areas, pressure systems or process critical equipment |

With the learnings above in mind the following should be followed when carrying out intrusive survey works:



| Person Responsible | Responsibilities |
|-----------------------------|--|
| Design | <ul style="list-style-type: none"> Ensure specifications for survey work include a requirement for the surveyors to identify hold points in their work should the work return unexpected results. Create separate Significant Hazards and High-Risk Services Drawings for working inside existing buildings where the buildings contain significant hazards such as HV, Chemicals/Fuel, DSEAR areas, pressure systems or process critical equipment. Consider including the provision of additional on-site marking or signage to highlight high hazard areas where these are not immediately visible and obvious. Ensure the specific risks are communicated for inclusion in site briefings. Ensure sufficient attention is paid in TBA to work in and around high-risk areas, particularly for intrusive survey work such as structural surveys, trial holes etc. Seek advice from Operations if required (e.g. Construction Manager, Electrical Supervisor etc.). |
| Project Manager | <ul style="list-style-type: none"> Work with design to make sure all preconstruction information has been provided prior to the Pre Award Meeting. Ensure Design are involved within all meetings with Supply chain Ensure relevant expertise are available on the project Organise site walkthrough of agreed scope of works with site team and contractor. |
| Construction Manager | <ul style="list-style-type: none"> Ensure suitable site supervision is in place including relevant specialisms. Ensure task constructability has been considered regarding existing hazards. Agree SSoW with contractor, review and approve RAMS |
| Site Manager | <ul style="list-style-type: none"> Check competencies of all workers attending site. Sufficient and in-depth induction including hazards within the working area. Supervision the works and ensure compliance with agreed SSoW. |
| Contractor | <ul style="list-style-type: none"> To understand the scope of works and the hazards within it. Align their RAMS accordingly and mitigate any hazards within methodology Work in line with the approved RAMS |

