# First Alert Update - Broken Pitching Chain

One of our project locations at Heathrow has recently had an 8mm pitching chain break during the process of extracting trench sheets.  The pitching chain clamp system consists of a locking clamp and a chain with a piece of wire.  The chain is mounted to a hoisting system on the piling machine (the vibratory hammer) - Dawson EMV300 Excavator Mounted Vibrator.  The pitching chain clamp system was not load bearing at the time of the incident.  There were no injuries.

**Description of the Incident**

A section of 5m long trench sheet had been extracted using a Dawson EMV300 Excavator Mounted Vibrator and pitching chain clamp system.  The trench sheet had been inserted into the jaws of the vibrator, vibrated free, lifted up and placed on the ground.  The pitching chain links had broken into two sections during the extraction process, causing the trench sheet being held on the ground to freefall within the exclusion zone when the vibrator was raised off the pile.   No-one was present in the exclusion zone.

**Immediate actions and findings**

Sheet piling activities were suspended until a visual examination of all pitching chains had been carried out for signs of damage or excessive wear and tear, prior to re-commencing.  No other pitching chains showed signs of distress however new chains were provided as a precautionary measure.

We believe that the pitching chain had been inserted correctly (no twists, knots etc.) in the furthest from the top hole of the trench sheet and secured with the chain clamp.  We found that the 25mm hole cut into a sheet (which the pitching chain was fed through) **was less than 250mm down from the top**.  We concluded that the jaws of the vibrator crushed the chain causing the links to break when the sheet was vibrated free.  The broken chain has been sent for examination by an engineer at Magnor Plant.

A check should be undertaken to ensure that all trench sheets have a 25mm hole cut into them, no less than 250mm down from the top of the sheet.