



NJUG CASE STUDY

CASE STUDY 20: Health and Safety Training Initiative

The National Joint Utilities Group (NJUG) is the UK industry association representing utilities on street works issues. The thirty-eight companies¹ we represent work to deliver gas, electricity, water and telecommunications to both individual consumers and UK plc.

NJUG members need to continue to drive forward further improvements. We have therefore developed the NJUG Vision for Street Works, which revolves around six main principles:

1. Safety is the number one priority
2. Damage to underground assets is avoided
3. Utilities work together and in partnership with local authorities to minimise disruption
4. Utilities deliver consistent high quality
5. Utilities maximise the use of sustainable methods and materials
6. Street works in the UK are regarded as world class

This case study is an example of NJUG delivering on these principles and turning the Vision into a reality.

Overview:

Laing O'Rourke's five-year rolling contract with the Welsh Water Alliance involves the rehabilitation of a maximum of 2357km of existing water mains throughout Wales, using a number of the following techniques:

- Epoxy or PU lining
- Slip lining
- Pipe bursting
- Open cut
- Directional drilling

Much of the refurbishment is performed by 4-man gangs working with a degree of independence from other works on the same scheme.

Within the utility industry there has always been a problem with releasing individuals for training due to "gang working". For example, if you take away two members of a four-man gang for training, you are effectively reducing the workforce by 50%. This can have a major impact on health & safety and production. This was the problem Laing O'Rourke sought to address through a new health and safety training initiative.



¹ NJUG's current members are Energy Networks Association (representing electricity and gas), Water UK (representing all water and wastewater companies), National Grid, Openreach, and Virgin Media. Our associate members are Clancy Docwra, Skanska McNicholas, Balfour Beatty, Morrison, Morgan Est, NACAP, PJ Keary, First Intervention, Carillion, Enterprise, Laing O'Rourke and AMEC. Including members through trade associations, NJUG represents thirty-seven utility companies.

Case Study

In order to address this issue, a weekly training program was developed over a period of approximately 6 months by the project's Health, Safety and Training department. The program involves removing the complete gang (including the supervisor) from the workplace, for a full week of training.

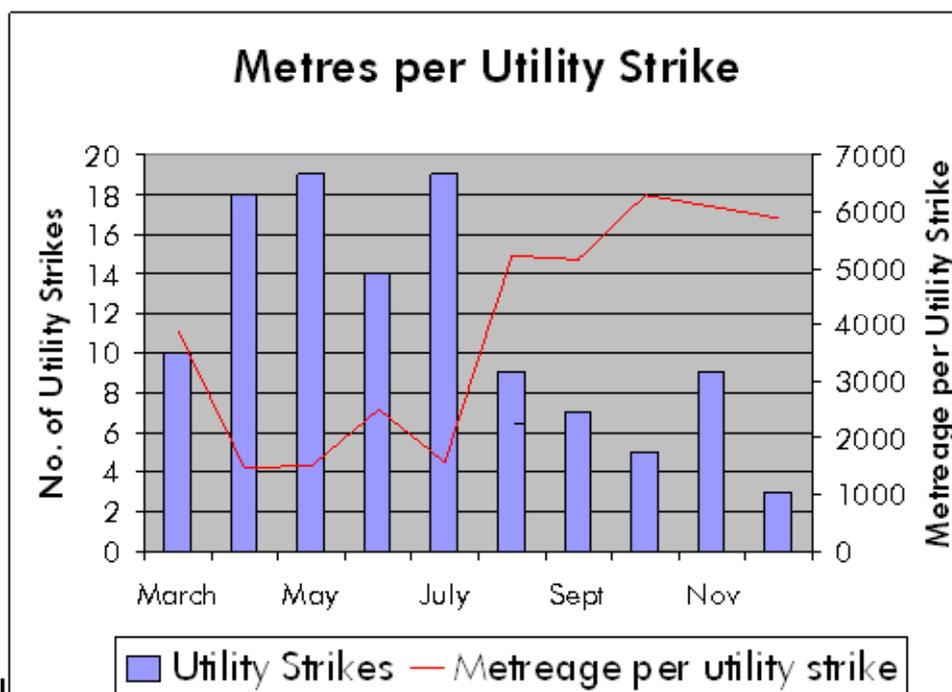
During the week the gang undergo the following training:

- **Day 1:** Energy Utility Skills, Health, Safety & Environmental awareness course, delivered by the Project Health and Safety Team
- **Day 2:** Hygiene / Chlorination awareness, delivered by the Water Quality Team
- **Day 3:** Core Skills including Buried Services Avoidance, Manual Handling, Abrasive Wheel
- **Days 4 and 5:** Excavation Support (theory and practical)

The subjects chosen were based upon the key areas of risk associated with the work being undertaken. All courses require the attendees to undertake assessments / examinations for each of the modules. As of December 2008, 376 employees (including supervision and management) had participated in the weekly training programme out of a total of 402 eligible employees (94%).

Due to the structured approach of the weekly training programme, the Construction and Planning teams were able to programme and plan their activities more effectively on site. This resulted in minimising disruption and allowing planned production levels to be achieved.

Furthermore, as a result of the training initiative, the teams increased the length of pipe they were refurbishing per utility strike as well as decreasing the frequency of utility strikes. This is shown in the below graph.



As the graph indicates, the teams involved went from completing 1579m per utility strike in July 2008, to 5892m in December, as a result of the new training system. In addition there were clear improvements to the standard of excavation support being implemented on site, verified during site audits and inspections.

The implementation and delivery of the weekly training programme has provided the workforce with the core skills necessary, allowing the project teams to develop additional modules dealing with specific training needs.

Based upon the success of this programme and the positive comments received from members of the workforce, preparations are currently being made to roll out the next programme of training.