



NJUG CASE STUDY

CASE STUDY 70: First Intervention - Reinst-8-ment™ Best Practice Guides

Winner of the NJUG 2013 Quality Award

The National Joint Utilities Group (NJUG) is the UK industry association representing utilities solely on street works issues. The 38 utility companies and 18 contractors¹ we represent are major contributors to economic growth, and 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. Utilities deliver consistent high quality
3. Utilities work together and in partnership with local authorities and contractors to minimise disruption
4. Utilities keep the public informed on all aspects of works
5. Utilities maximise the use of sustainable methods and materials
6. Damage to the underground assets is avoided

This case study is an example of the street works sector delivering on these principles and turning the vision into reality.

Overview

Using the latest everyday technology to provide procedures to ensure reinstatement compliance, First Intervention came up with a novel initiative which provides easy to follow good practice guides for operatives, supervisors and operational managers on site. The guides cover reinstatement of Bituminous footway/carriageway, White-work footway and Backfill/Compaction and are the product of 120 site visits and laboratory testing of reinstatements during execution and at completion.

Case Study

Background

Due to some instances of high numbers (70+%) of non-complying reinstatements found during Highway Authority coring programmes, First Intervention received a number of enquiries from utility companies and contractors asking First Intervention to undertake core sampling and air void testing of their reinstatements to help them understand the reasons for failure.



First Intervention suggested a different approach to the conventional one, and using their experience gained during 15 years of monitoring and auditing in excess of 750,000 reinstatements, core testing in excess of 96,000 permanent reinstatements and subsequent air void testing at 19,000, they embarked on a process to look at why there was such a high percentage of non-complying works.

¹NJUG'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, Balfour Beatty, Carillion, First Intervention, Laing O'Rourke, Compass, AMEC, Enterprise, Morrison Utility Services, Fastflow Pipeline Services, Kier Group, CLC Ltd, PJ Keary, Murphy Ltd, Murphy Group, Morgan Sindall and SQS. Including members through trade associations, NJUG represents thirty-eight utility companies, eighteen utility contractors.

Activity

The project set out to monitor the various stages of works whilst they were being undertaken and included all stages of the work to completion. The visits looked at the use of hand tools, equipment, and materials, and the process and procedures being adopted by the companies/teams, including their knowledge of the application of the SROH.

The sites visited covered the North West, Midlands, London, South West and Wales, and involved working with Electricity North West, Northern Gas Networks, North Midland Construction, Bristol Water, Cappagh Contractors, Enzen Global Ltd and Welsh Water.

Analysis

Irrespective of location, the same trends were highlighted in varying degrees. In some cases teams did not have appropriate tools to complete their tasks correctly; equipment was not always maintained; the number of compaction passes and the depths that should be applied at each construction layer were not always met; during bituminous reinstating too much water was applied and the effect of this was not always known; and many teams did not have thermometers or were not aware of material laying temperatures. These trends were not limited to the bituminous reinstating teams, but also included supervisors and operational managers.

Response

From the information gathered, hands-on coaching was implemented to take the teams through each specific task, and explain the reasons for applying the defined process and procedures.

The Guides follow the requirements of the Specification for Reinstatements of Openings in the Highway (SROH). Additional activities were not applied though a standardisation of approach was implemented.

Result

During the site trials material types, compaction equipment, weather, temperature, and vehicles were recorded. Also tested were in-situ compaction of backfill and sub-base, and 70 core samples were cut from the 120 reinstatements during a period of one year to test for air void compliance. The results were remarkable. **Teams that believed it was not possible to comply with air void requirements achieved 100% compliance – a huge improvement - just by applying the step-by-step guides to the reinstatement process.**

Innovation

The Best Practice Guides provide everyone with the clear guidelines they need to ensure compliant backfill and reinstatements, and they are usually produced in each company's own branding and are implemented through induction training by First Intervention. The success of the Best Practice Guides have been recognised by South East HAUC (SEHAUC) and were presented at this year's event, branded as SEHAUC and freely given to the attendees to promote Best Practice in reinstatement activities. In addition to this the guides are available as a phone app to download from the internet.

Benefits

The Guides promote continuous improvement and development in reinstatement activities, as confirmed by the testimonials, and have reduced non-complying reinstatements. This has resulted in reduced traffic disruption due to reinstatements being completed first time, which has also reduced costly second visits to rectify non-complying works, and in-turn, protected brand image. This initiative is still on-going, and with other utility companies and contractors noting the benefits and aspiring to join in the success of this project, it will undoubtedly benefit street works reinstatements still further.

