National Joint Utilities Group

CASE STUDY NUMBER 88: SQS & Oxford Plastics Reinstatement Depth Gauge

WINNER OF THE NJUG HIGH QUALITY AWARD 2016

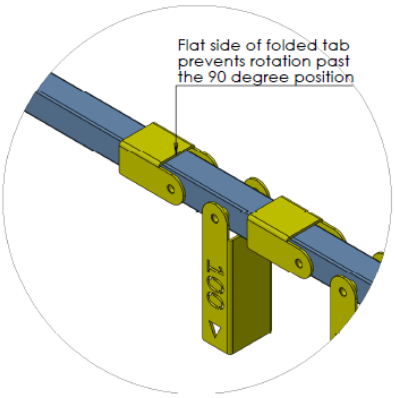
The National Joint Utilities Group (NJUG) is the UK industry association representing utilities solely on street works issues. NJUG represents some 56 utility companies and contractors engaged in the street works sector, and 18 specialist sub-contractors who provide equipment, materials and services supporting street works activities. Our members represent major contributors to economic growth and work to deliver gas, electricity, water and telecommunications to both individual consumers and UK plc. In order to continue this drive for further improvements within the industry - we have developed the NJUG Vision for Street Works, which revolves around seven main principles:

- Safety
- High Quality
- Minimise Disruption
- Keep the Public Fully Informed
- Sustainable Methods and Materials
- Avoid Damage to Underground Assets
- Innovation

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

Overview

Stanmore Quality Surfacing (SQS) and Oxford Plastics created an instrument designed to give local authorities confidence that reinstatement bound layer depths have been completed to specification just from an image.



Case Study

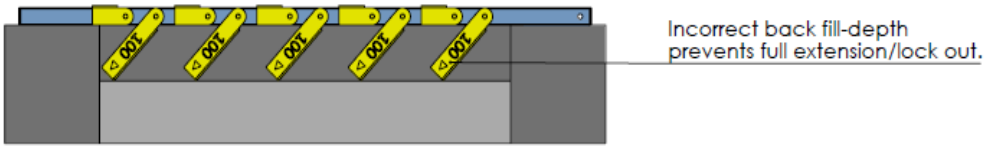
Whilst there is equipment on the market to measure reinstatement depth, most are not sufficiently durable for operational staff to use or do not give local authorities confidence that reinstatements are compliant.

SQS already have a number of processes in place to drive reinstatement compliance but in spring 2016 the company were determined to create a simple instrument which would enable them to ensure that their reinstatement depths were compliant with the Specification for Reinstatement Openings in the Highway (SRoH) from just a photographic image. SQS partnered with Oxford Plastics and six designs were created. From these designs, two prototypes were made following internal and external discussions and research, this model was selected.

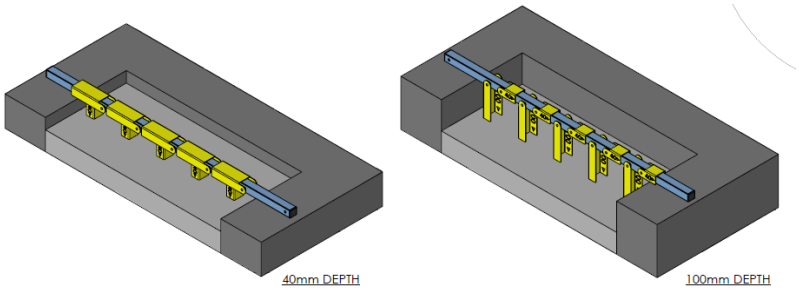
The first model had two measuring gauges, 100mm and 40mm. The 100mm is used on type 3-4 roads once the reinstatement has been backfilled. The 40mm is then used once the binder course has been laid to show the surface course will be the correct depth.

Unlike most current measuring devices – for example, depth sticks, this model stands alone which allows the operational staff to place in position and then take an image. It is light-weight and extremely durable making it easier for operational staff to use and transport. All the operational staff involved in this project liked and promoted this instrument.

The device will have locking mechanisms showing that the measuring gauges are fully extended. The spirit level is further proof that the instrument is level when the image is taken.



Dependent on the size of the patch more images can be taken, but due to the amount of measuring gauges only two images would be required for most utility reinstatements as it will measure multiple sections in just 1 image. The measuring gauges can be individually retracted allowing the instrument to sit over any fixed feature and still measure the surrounding reinstatement.



The next model will include a 60mm gauge to measure footway reinstatements, allowing one instrument to cover over 90% of utility reinstatements. It will also have the option of including a depth stick measure on the side so it can be multi-functioning. A model to measure Type 0-2 roads will also be available.

Benefits

- A reduction in core failures with related reinstatement defects; and
- A permanent halt or reduction in the number of agreements with local highway authorities around the need for coring in exchange for images.

Based on 2016 estimates, SQS will save over £87,000 per annum. There is also an estimated potential saving of £310,000 on the basis that this instrument avoids core failures on the 0.5% of SQS' work that is currently cored.

Feedback from local authorities

David Latham, Highway Policy & Inspections Manager, Kent County Council: *"SQS has worked in Kent for several years now, always fully committed to achieving good quality work which is right first time. They have employed innovation to manage and drive quality, this simple practical device will further enhance reliability of layer control and compliant reinstatements."*

Julie Keenan, Network Compliance Team Manager, LBHF & RBKC: *"At LBHF/RBKC we support any tools that can help reinstatement gangs reconstruct our highway correctly. This is the second time we have seen SQS introduce an instrument to their workforce to help them achieve this. SQS are one of the few contractors who show real commitment to getting it right and are fast emerging as one of the best contractors in London. The Depth gauge is simple and easy to use, the assurance that photographic records will be kept further supports the gangs are encouraged to backfill layers correctly.*