



## Construction and Maintenance Health, Safety and Wellbeing Briefing

March 2019





## What can you do for Stress Awareness Month?

- Talk about Stress and its effects – lets work together to reduce the stigma that is associated with stress by talking about the topic openly and freely with friends, family and colleagues.
- Share your coping mechanisms – if something has worked for you why not share it. It might benefit someone you care about and in the meantime it might help you take your focus off your own challenges.
- Be nice to those who are stressed and anxious – we are all undoubtedly going to experience stress and anxiety in our lifetime so treat others going through it with compassion and empathy.
- Look after yourself – we all need to think more about self –care. Take time out of your day to relax or do something that you enjoy. Don't forget to exercise and eat well, even when you feel too stressed.

The most crucial thing you can do when you are stressed or anxious is to make sure you are continuing to look after yourself. Make time to relax when you need to and learn to say no to requests that are too much for you.

<http://www.stress.org.uk/national-stress-awareness-month-2019/>

## Spotlight on Stress Awareness

Stress Awareness Month has been held every April, since 1992 to increase public awareness about both the causes and cures for our modern stress epidemic. Despite this running for 20 years there is still a long way to go. According to the Mental health Foundation 74% of UK adults have felt so stressed at some point over the last year they have felt overwhelmed or unable to cope.

Millions of us around the UK are experiencing high levels of stress and it is damaging our health. Stress is one of the great public health challenges of our time, but it still isn't being taken as seriously as physical health concerns. Stress is a significant factor in mental health problems including anxiety and depression. It is also linked to physical health problems like heart disease, problems with our immune system, insomnia and digestive problems. Individually we need to understand what is causing us personal stress and learn what steps we can take to reduce it for ourselves and those around us.

## Blue Star Focus

The following Blue Star has been issued in the period for Excellence/ Innovation in Health and Safety:-

On the M4 SMP Balfour Beatty/VINCI JV project, an automated drilling rig has been developed and trialled in conjunction with specialist supplier ASSET International. The drilling rig is lifted from the wagon by use of a specially designed davit arm and placed onto the top of the barrier. Once installed the drilling rig then runs along the top of the barrier to each securing position, and completes the drilling/anchoring of the barrier, no further lifting is required until all works are complete.

## The Benefits

- Elimination of vibration to the workforce
- Reduction of exposure to noise and dust due to positioning of the operator and provision of local exhaust ventilation.
- Elimination of manual handling
- Reduced risks associated with lifting and increased control as this is via a specifically designed davit arm
- Shorter installation times, resulting in reduced disruption to the travelling public
- Reduction of time on site reducing numbers of workers at risk and disruption to the travelling public through 100% Improved productivity.

## Spotlight on the Dangers of Working Around Overhead Services

### Driver killed after grab arm hits overhead power line

Luton Crown Court heard how, on 16 September 2016, a driver was unloading material at a Farm in Hunsdon, Hertfordshire. He was using the grab arm when it came into contact with an 11kv overhead power line (OHPL) and he was killed.

An HSE investigation found that the risk from OHPL's had been identified in risk assessments but had failed to implement them and adequately plan construction work and to train its employees. The company pleaded guilty to safety breaches and was fined £400,000.00 and ordered to pay costs of £17,242.33.



After the hearing, the HSE inspector said “This was a tragic and wholly avoidable incident, caused by the failure to implement safe systems of work and to ensure that health and safety documentation was communicated and followed.

**“Every year in the UK, two people are killed and many more are injured when machinery comes into contact with, or close proximity to, overhead power lines”.**

Source: Construction Enquirer

## CSCS announce plans to withdraw Industry Accreditation

For several years the strategic direction of the Construction Skills Certification Scheme (CSCS) has focused on ensuring that all applicants can demonstrate the achievement of a nationally recognised construction related qualification.

With the introduction of the Labourer card, the withdrawal of the Construction Related Occupation card and the planned removal of the Site Visitor card the next step is the withdrawal of cards issued under Industry Accreditation.

Industry Accreditation, also known as Grandfather Rights, allowed workers to obtain CSCS cards on the strength of an employers' recommendation rather than the achievement of a recognised qualification. CSCS closed Industry Accreditation to new applicants in 2010 but those already holding a card are currently able to renew on the same basis.

CSCS has consulted with the industry and agreed a plan that will pave the way for the eventual withdrawal of cards issued under Industry Accreditation.



**From 1st January 2020, all cards renewed under Industry Accreditation will expire on 31st December 2024 and CSCS will stop issuing the card from 30th June 2024.**

The withdrawal of Industry Accreditation will be the final step towards achieving the Construction Leadership Council's objective of ensuring cards are only issued to those who have achieved, or are in the process of achieving, a nationally recognised construction related qualification.

Visit [www.cscs.uk.com/ia](http://www.cscs.uk.com/ia) to find out what steps you need to take to replace a card issued under Industry Accreditation.

## Highways England Health and Safety Passport Update

As part of Highways England's 5-year Health and Safety Plan, Action 38 is to develop the Highways England Health and Safety Passport Scheme to help validate and maintain the standards of those who work on the network to help ensure everyone goes home safe and well.

The Passport system and individual smartcard makes it more straightforward for trained, qualified operatives to gain access to Highways England sites. It reduces the need for duplication of data, as the individual's record moves with them from site to site, project to project – regardless of which principal contractor is responsible.

Passport launched in November 2017 and was co-developed with the industry-wide Highways England Common Induction (HCI). The HCI, assured by LANTRA, aims to streamline the induction process by delivering core induction material once, so that only site- or employer-specific induction elements need to be delivered additionally.

An update to Raising the Bar 23 - Site Inductions has been recently published which provides clarity to the implementation dates of the Highways England Passport Scheme.



All contracts and projects required to adopt the passport scheme will need to develop an implementation action plan which sets out the steps and timeframe for implementation. Plans are to be emailed to [hepassport@highwaysengland.co.uk](mailto:hepassport@highwaysengland.co.uk) by 31st May 2019.

## Lifesaving Rule

All contracts and projects that are due to start after 30th April 2019 or those that started before 30th of April 2019 but are not due to finish after 1st April 2020 (inclusive of contracts and projects that are in pre construction) must fully comply with the Highways England Passport scheme, including HCI, by 31st October 2019.

Any contract and project that is due to be complete by the 1st April 2020 may choose to adopt all, part or no element of the Highways England Passport scheme.

## Focus on Toolkit Good Idea – Gas to Liquid Fuel Issues

The combustion of fuel produces air pollutants such as Nitrogen oxide, particulate matter, carbon monoxide and unburnt hydrocarbons. These pollutants can be harmful to people's health and the environment. For example nitrogen oxide can increase the susceptibility of people to respiratory disease and to allergens. In the presence of sunlight it oxidises to produce photochemical pollutants including ozone. Particulate matter has been shown to have a range of health effects including respiratory and cardiovascular illness. Black carbon in particulate matter has also been implicated in climate change.

In order to reduce the projects impact on health and the environment alternative fuels were investigated

### Solution

Gas to Liquid (GTL) fuel was identified as an alternative which can be used in any diesel engine, regardless if it's a vehicle, piece of machinery or equipment. There's no need for any engine modification, new infrastructure or vehicle/machinery investment. GTL converts gas to liquid using the Fischer-Tropsch process. The benefits of GTL fuel include a reduction in harmful emissions, it can be used as a direct replacement to

### Key Improvements

- A reduction in air emissions, including the pollutants of Nitrogen Oxide, Particulate Matter, Carbon Monoxide and unburnt hydrocarbons.
- GTL is more biodegradable than conventional diesel.
- Reduced noise levels in some engines due to better combustion.
- Enhanced start up in cold conditions due to higher cetane number.
- It has a higher flash point compared with conventional diesel, bringing an indirect health and safety benefit.

## Focus on Service Avoidance

### What you need to know

When underground cables are damaged, people can be killed and injured by electric shock, electrical arcs (causing an explosion), and flames. This often results in severe burns to hands, face and body, even if protective clothing is being worn.

Damage can be caused when a cable is:

- cut through by a sharp object such as the point of a tool; or
- crushed by a heavy object or powerful machine

**Remember:** Cables that have been previously damaged but left unreported and unrepaired can also cause incidents.

The HSE booklet **“Avoiding danger from underground services”** gives guidance on how you can manage the risks of digging near underground cables.

The Electricity Networks Association (ENA) publication **“Watch It! When digging in the vicinity of underground electric cables also provides advice”**.

### What you need to do

If you are digging or disturbing the earth you should take care to avoid damaging underground services. Underground electrical cables can be particularly hazardous because they often look like pipes and it is impossible to tell if they are live just by looking at them. Damage to underground electrical cables can cause fatal or severe injury and the law says you must take precautions to avoid danger. Excavation work should be properly managed to control risks.



## Smart Permit to Dig System – generates more than £2m in efficiency savings on the A14

A team of Skanska civil engineers working on the A14 project have developed their programming skills to create Smart Permit to Dig (SPtD), a web-based permit platform which manages utility asset information and helps operatives to carry out construction activities more safely and efficiently.

One of the biggest challenges on the project has been proactively managing more than 500km of new and existing underground apparatus providing services such as water, gas, power and telecoms services.

Around 1000 permits to dig are generated by the project each month for permanent works construction - and managing these has a major impact on time and resources.

To make this process more efficient, a team of developers led by Skanska sub agent Lukasz Klosinski designed the SPtD platform and implemented it on the project.

The SPtD system combines a live utilities model, an associated GIS-based drawing generator, and an electronic permit form system which automates process flows and generates email notifications for users. It also has an active dashboard for performance monitoring and trend analysis.

The team built the platform to improve the quality of the permits submitted, automatically generate notifications, and update the utilities asset database. As a result, more than 50% of permits are processed within an hour and the process is fully traceable.

The system improves data quality by requiring users across the project to submit consistent information. The health and safety team on the project is now using the data generated to help change behaviours across the project by

identifying where safety issues are taking place and putting measures in place to prevent them from happening again.

Users can access the system with a web-enabled device wherever they are, improving access to live asset information. The project efficiency team has calculated total savings of over £2.2m; that equates to more than £1m each year since its implementation through process efficiencies alone.

SPtD is built on an open-source software platform and organised into BIM level 3 logic, which means that the system architecture can be adapted for use on other projects and engineering processes.

“By creating this system, we’ve learned that many people working in the construction industry have the skills and desire to embrace digitalisation and improve the way we build. We have achieved a lot because we have created a learning culture. These digital and programming skills can be learned, all that you need is passion and diligence,” said Borys Moj, Utilities Manager, Skanska.

This video explains how the SPtD system works. <https://vimeo.com/a14/techfest>  
For more information please contact Bors Moj at [bory.moj@the14.com](mailto:bory.moj@the14.com)



# Update from the Supply Chain HUB meeting

Members of the community are currently reviewing and updating the following Raise the Bar documents;

- Raise the Bar 7 – Overhead Structures
- Raise the Bar 9 – Service Avoidance
- Raise the Bar 29 – Supervision
- Raise the Bar 25 – Unloading /Loading

Revisions are to be completed by the end of May so watch this space for new releases.

We were joined in April by Bors Moj from the A14 to introduce the Smart Permit system currently in place on this scheme. You will find more about the system within this newsletter.

Other topics discussed during the meeting included Drugs & Alcohol testing, Conflict Management training and the review of the Highways England Event Reporting Requirement Procedure – further details of these topics will be included in future editions.

If you have any comments or queries for members of the group, please send an email to [HighwaysSafetyHub@highwaysengland.co.uk](mailto:HighwaysSafetyHub@highwaysengland.co.uk)

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