



Form Ref: HSI-10

## Independent Health & Safety Inspection – Blue Star Item

Version: 3.0 Jan 2017



## Awarded for Exceptional Performance or New Initiative not widely used on other sites

Project	Principal Contractor (PC)	Date of Inspection
A19/ A1058	SLJV	11/01/17
Site Contact	Email Address	Telephone Number

## Description of Blue Star Item

During the initial phase of the scheme our team has encountered 206 uncharted cables in the ground. Out of the 206, 64 of these cables have been live, pot ended and redundant, left in the ground from previous schemes.

Historically the roundabout has been redesigned twice in the previous ten tears which have left an array of cables from traffic loops to 11kv uncharted HV cables. This has driven the site to produce a bespoke SLJV procedure which concentrates around the identification and avoidance of underground services. The SLJV system uses a red and green permit system which requires a 3 person sign off to allow breaking ground. GPR scans are mandatory and the drawings produced are overlaid on to auto cad statutory undertaker drawings with marked trial holes to give a composite drawing for each area. In addition a cross section is produced by the surveyor to clearly show line, level and direction of services in the ground. Authorised persons to receive permits are nominated by the sub-Contractors who sign on to the site AP brief prior to being allowed to receive permits Trail hole logs are used to produce an additional layer on to the drawings to allow the team to identify services and reinstate the trial holes to eliminate working at height risks. Photograph's of the works area required to be excavated are taken and attached to the permit. These are marked to clearly identify the marks installed on the ground by the surveyor and used to brief the teams at the point of the excavation. Vacuum excavation has been employed to eliminate risk from services, these are dual manned to prevent reoccurrence of the M3 tragedy.

Bespoke training modules have been developed to ensure that all requirements of HSG 47 and RTB 9 in both theoretical and practical aspects.

gCAT4+ and genny 4 or comparable tool are stipulated as the minimum standard for use on site. The gCAT4+ is GPS enabled and allows the Service avoidance co-ordinator to download regularly to check the scans are being completed across the worksite in all modes but also in the preparation of permits. The output can be plotted on a google earth map and printed to show the scan patterns for each location.

The permits are issued for a maximum period of 1 week and a notice period of 48 hours is required for the production of a new permit.

BIM modelling is used to detect service clashes and plot where found uncharted cables pass through the works to determine removal.



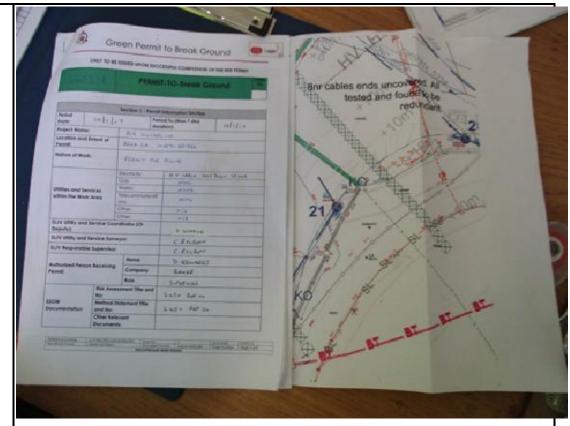


Benefits of Blue Star Item	The sheer number of uncharted cables has driven the SLJV to implement what we feel is a robust procedure fully compliant with all aspects of raising the bar. This has benefitted us by minimising our workforce exposure to the risks of underground services as well as the direct and indirect costs of service strikes from Injuries, lost time of production and repairs.  The implementation of GPR surveys as a minimum requirement has promoted clarity on our permits and a degree of certainty.  Vacuum excavation has proved to give a far safer trial hole and excavation method for a very similar cost to a hand excavation team due to the productivity that it can achieve.  Composite drawings and cross sections give clarity to the extent and limitations of the permit and remove doubt by the excavation crew
Details and Cost of any Specific Product	gAT4+ £730 Genny 4 £320









## Photograph

