aimingforzero
One workforce, zero harm

Form Ref: HSI-10	Independent Health & Safety Inspection – Blue Star Item	Version: 2.0 March 2018

Awarded for innovation and good practice for the first Highways England major project to use GTL extensively across a scheme.

Project	Principal Contractor (PC)	Date of Inspection
M5 Oldbury Viaduct – Major Renewal Scheme	BMV JV	14th November 2018

Construction Director	HE Regional H&S Manager	HE Regional H&S Manager
Nigel Fullam	Amrik Singh	Neil Tyson
Site H&S Manager		
Steve Pettet		

This inspection looked at the innovation initiative being used to replace conventional diesel fuel in machinery and equipment on the M5 Oldbury Viaduct- Major Renewal Scheme.

Top Risks:		

Key to RAG status:	
R	Non-conformance with Legislation or RtB Requirements
A	RtB Requirements not adopted everywhere on site or in full, and Negative Observation
G	Positive Observation relating to management of Top Risks
★	Exceptional Performance or New Initiative not widely used on other sites
O	General Observation requiring action

Description of Blue Star Item	Awarded for innovation and good practice for the first Highways England major project to use GTL extensively across a scheme. The project has started using GTL which is an alternative fuel manufactured from natural gas and burns cleaner than conventional diesel oil. GTL fuel 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.
Benefits of Blue Star Item	GTL converts gas to liquid using the Fischer-Tropsch process, producing more dependable molecules with fewer pollutions than conventional crude oil. The benefits are: • A reduction in air emissions, including the pollutants of Nitrogen Oxide, Particulate Matter, Carbon Monoxide and unburnt hydrocarbons. For off-road machinery, the characteristic reduction range for Nitrogen Oxide is

	6-25% and for Particulate Matter is 10-90%, when compared with conventional diesel. • 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. Has a higher flash point compared with conventional diesel, bringing an indirect health and safety benefit.
Details and Cost of any Specific Product	The GTL fluctuates in price – The scheme has purchased the fuel at cost and assessing if its more fuel efficient than conventional diesel. They are yet to complete their analysis. It will bring indirect savings by reducing their Carbon emissions. A separate fuel tank and bowser is required to carry the GTL fuel. If all engines are turned into GTL compatible, then one fuel tank and bowser will be used.

Ref	Observation Photographs
	 **Tower Light on the deck using G2L**
	 **Scissor Lift using G2L**