



# Safety Alert

## Hydrogen Generator Unit Fire

14 February 2023

The following pages of this safety alert were issued by:

**Balfour Beatty**

# SAFETY ALERT

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## Hydrogen Generator Unit Fire

### What happened?

At approximately 15.51 on 9 February 2023 the emergency services were called to the A63 Castle Street improvement scheme in Hull after a small fire was reported within the site's hydrogen generator unit.

Shortly after the completion of planned maintenance activities on the generator (which included topping up the cooling circuit of fuel cells with water ethylene glycol), smoke was observed coming from beneath the floor of the unit where the generator's battery banks were located. The Geopura technician in the unit manually activated the isolation shutoff system (emergency power off - EPO), which isolated all electrics, shut off the hydrogen supply to the unit and vented any hydrogen contained within the fuel delivery system.

The unit is fitted with smoke detectors and, had the technician not immediately activated the shutoff manually, the smoke detectors would have automatically triggered safety relays and shut down the system automatically (automatic EPO).

The site's emergency plan was initiated, and fire wardens activated the site's fire alarm system and evacuated site staff to a place of safety. The emergency services arrived on site within five minutes to manage the incident and extinguish the fire. As a precautionary measure, the fire services removed the battery fuses under the guidance of Geopura's electrical engineer and recommended a 24-hour fire watch.

The 24-hour fire watch was completed. However, 36 hours later, the battery bank reignited and was again dealt with by the fire service. It is important that we fully understand the risks associated with battery fires and ensure that we liaise with the fire service to establish what additional precautions will be needed to prevent reignition.

No individuals were injured as a result of the event, and fire damage was limited to the unit itself. **This has not been classified as a hydrogen-related fire.**

### Action required

Should you have a hydrogen generator on your site it is recommended that you contact your provider to ensure that they are aware of this event, refresh yourselves on the safety measures in place (including planned preventative maintenance and safety shutoff systems) and review your [emergency arrangements](#).

Lee Hewitt  
Health, Safety & Environment Director

