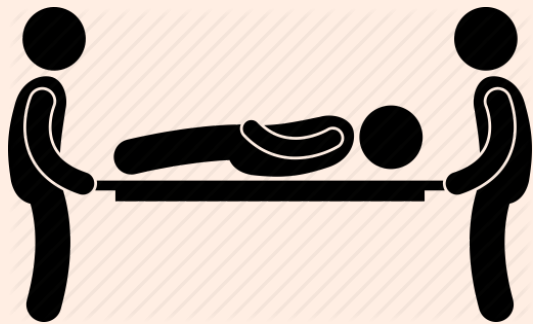


# AIR PRODUCTS CASE STUDY

**LOCATION:** Saltend Chemical Park  
**TIMEFRAME:** January 2022

In support of the Air Products Cold Box outage on the Saltend site, Hull, HFR Solutions were requested to provide 2 x Rescue Technicians, to ensure a suitable rescue plan was in place throughout the project on the 50 metre high structure, regardless of external weather conditions, this included high wind speeds where the crane man riding basket couldn't operate safely. The project involved removal of Perlite from within the cold box structure, classified as a confined space, and work at height due to access been via scaffolding or vertical hooped ladders.



## SOLUTIONS DELIVERED

- Providing rescue planning consultancy and rescue team provision for the work in the confined space internal cold box structure and work at height rescue including medical intervention
- Against the legal requirements of the confined space regulations 1997 and work at height regulations 2005
- 24 hour rescue and medical provision across the risk critical elements of the project

## EXERCISE 'COLD BOX BREAK'

The exercise conducted was to test HFR Solutions capability to implement the rescue plan. The exercise was based on credible scenarios identified from the risk profile during the outage and had been discussed with Air Products and HFR Solutions managers prior to the exercise. A pre-exercise brief was provided to rescue personnel, clarifying safety and welfare considerations, and the participants were asked to treat the scenario as a real incident as far as reasonably practicable. The scenario involved a contractor exiting the Cold Box when he cockled over on uneven scaffolding boards. The severity of the twist on the contractor's ankle had

caused a visible deformity, resulting in excruciating pain. The injured person (IP) required medical intervention (splinting) and pain relief (Penthrox). HFR Solutions ERT are already at the location to assist and have been informed that the crane is inoperable due to high wind speeds at 50m level. The ERT carried out an initial casualty survey and confirmed the IP had a break to his right ankle. The Safety Attendant was requested to confirm with Air Products project team that an Ambulance had been requested to attend site, and a call was made to PX (following the site emergency response plan) while the ERT started treating the IP.

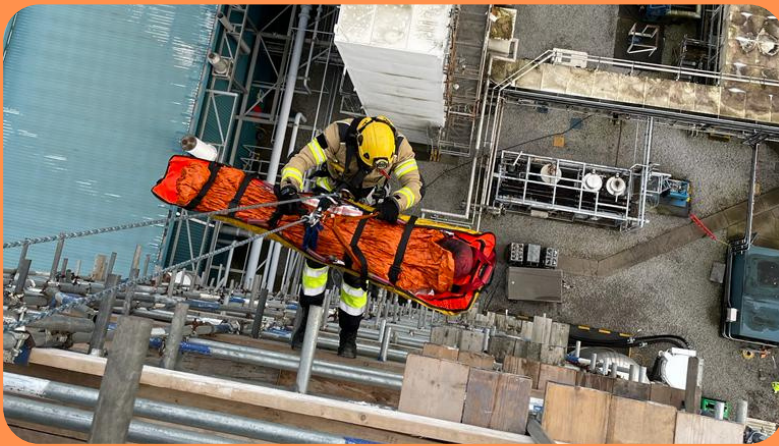
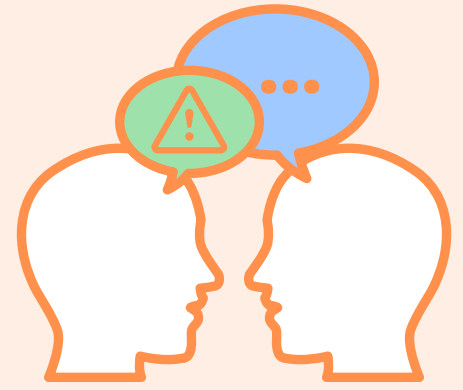


## WORK AT HEIGHT RESCUE PLAN

The Rescue Plan was verified on-scene due to the dynamic nature of injuries sustained and it is identified that the fabric weather sheeting secured to the scaffolding on the leeward face needed to be lowered to affect the rescue, this area also offered greater flexibility for anchor points, and a clearer descent down to ground floor level for the stretcher/IP. The Work at Height Rescue equipment was then rigged using the substantial lifting point on the cold box structure. The primary IKAR CRD was secured using an anchor strap, and the scaffolding beam used above head height was used to deviate the rescue line through a pulley to allow good clearance to be achieved allowing the stretcher/casualty to be raised up and over the handrail and lowered to ground floor level.

## OUTCOMES

It was evident throughout the exercise that there was a considerable amount of technical experience within the ERT to deal with medical interventions and rescue. However, it was also highlighted that the confined space entry point would prove challenging should an IP become unconscious and require extraction due to its restricting nature. It was reiterated to the ERT that this is why the Rescue Plan dictates the wearing of a personal harness in ALL confined spaces throughout the outage, to allow rapid extraction and rescue from the top of the cold box. A safety knife was also suggested and will be placed with the rescue equipment to allow rapid removal of the protective sheeting should it be required.



## DEBRIEF

Shaun Lyons (HFR Solutions) was responsible for scene safety throughout the rescue operations, and the drop zone area was selected prior to starting the exercise, this was identified on the leeward (sheltered/protected) side of the structure to maintain a safe extraction even in high wind conditions. On completion of the exercise a full debrief took place with both the HFR Solutions and onsite teams, and feedback given to the participants.

### Shaun Lyons from HFR Solutions said:

"Working with the sites management team prior to the project, allowed us to identify all the foreseeable incidents and ensure that HFR Solutions could treat any injuries or medical conditions effectively, then safely extract the casualty from the confined space and lower them to ground floor level using specialist rescue equipment and technical rescue experience. Our presence throughout the project assisted in maintaining a positive safety culture and reassurance that the legislative requirements were robust and enacted if required."

## WHO ARE WE?

HFR Solutions are an ISO-accredited Community Interest Company founded in 2012 who specialise in emergency response and workplace safety. We work closely with organisations to help better #PlanPrepareRespond in an emergency, comply with legislation and ensure employees hold the competency to maintain a safe working environment. This is achieved through the delivery of emergency response and management solutions, safety-team deployment, as well as confined space, fire safety, advanced first aid and work at height workplace safety solutions.



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