

“Pipeline Hazards and Resilience”

UKOPA

United Kingdom Onshore Pipeline Operators' Association

Members Update - 8th/9th October 2025

Cornell University defines energy resilience as:

“The ability to avoid, prepare for, minimise, adapt to, and recover from anticipated and unanticipated energy disruptions in order to ensure energy availability and reliability.”

It means maintaining a consistent supply of energy despite disruptions, whether they stem from natural disasters, cyberattacks, geopolitical tensions, or other unforeseen circumstances.

- *One Piece of work*
- *How does this help with Resilience?*
- *How Could this help UKOPA members?*

Emergency Planning and Resilience Working Group (EPRWG) Update

John Madden

How does the EPRWG improve Resilience and mitigate Pipeline Hazards?

Pipeline Emergency Response Officer (PERO)

- Refreshed Content (including updated GP guide advice)
- Updated Stationary / Handouts
- Clear delivery strategy and support from Fire Training centre
- Shared learning across organisations
- Developed by UKOPA for UKOPA Members
- 2-day course including meals and accommodation
- Mixed operator course to aid sharing of learnings

Date of PERO training course
19 th – 20 th March 2025
8 th – 9 th April 2025
7 th – 8 th May 2025
28 th – 29 th May 2025
10 th – 11 th June 2025

Focus on interaction between industries

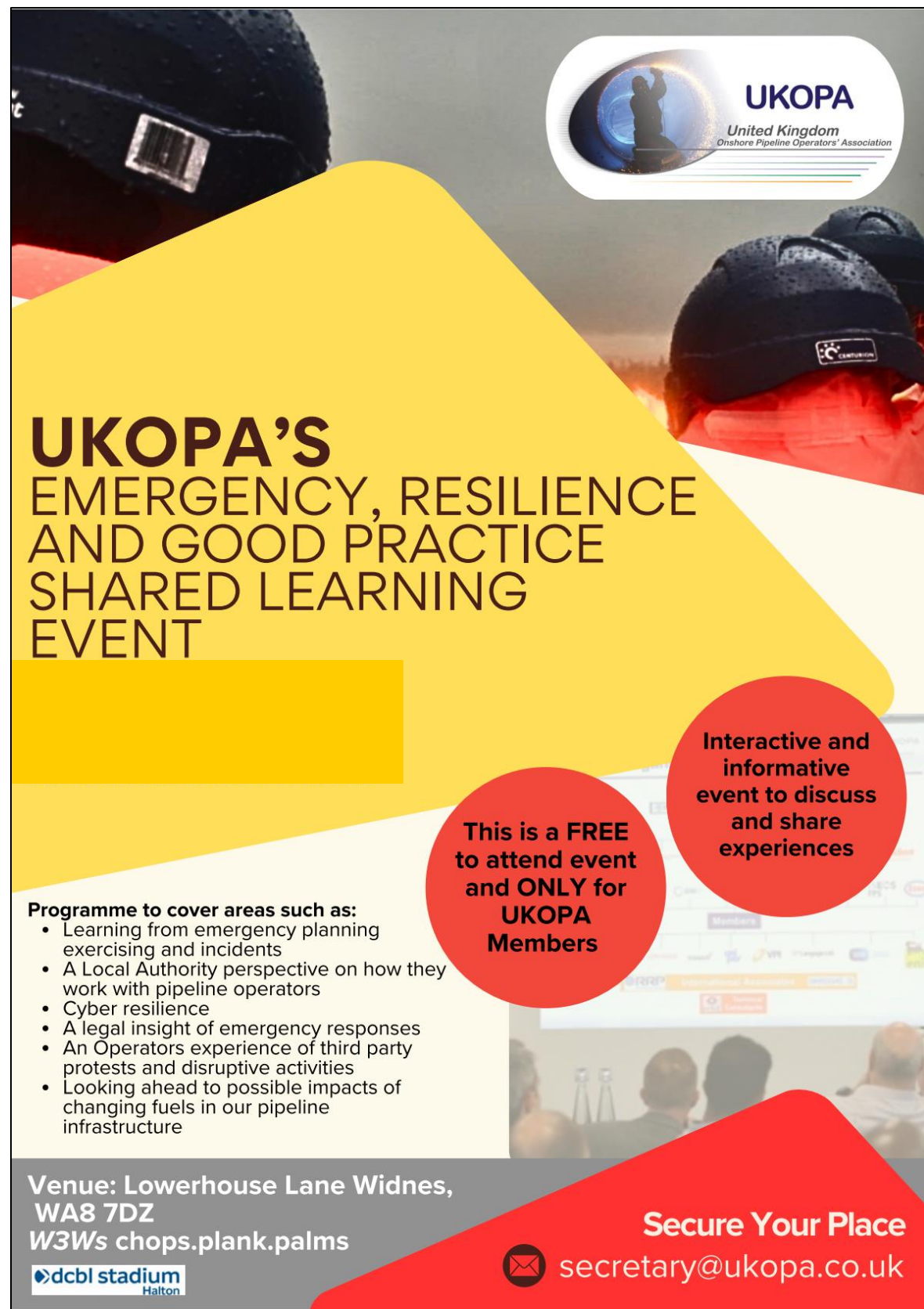
Over 1420 trained delegates since 2010

Training built into operator competence

Good Practice Workshop – Summer 2026

Share
Knowledge
and Good
Practice

- Suggested Agenda Includes:
 - Real life incident learnings (Above Ground Installation, Cyber and Pipeline)
 - Local Authority / HSE perspective on how they work
 - Emergency Services Discussion
 - National Exercises Learnings
 - DESNZ Presentation
 - A look ahead to possible impacts of changing fuels to our pipeline structure
 - Cyber Resilience & threat landscape



UKOPA
United Kingdom
Onshore Pipeline Operators' Association

**UKOPA'S
EMERGENCY, RESILIENCE
AND GOOD PRACTICE
SHARED LEARNING
EVENT**

Programme to cover areas such as:

- Learning from emergency planning exercising and incidents
- A Local Authority perspective on how they work with pipeline operators
- Cyber resilience
- A legal insight of emergency responses
- An Operators experience of third party protests and disruptive activities
- Looking ahead to possible impacts of changing fuels in our pipeline infrastructure

This is a FREE to attend event and ONLY for UKOPA Members

Interactive and informative event to discuss and share experiences

**Venue: Lowerhouse Lane Widnes, WA8 7DZ
W3Ws chops.plank.palms**

Secure Your Place
secretary@ukopa.co.uk

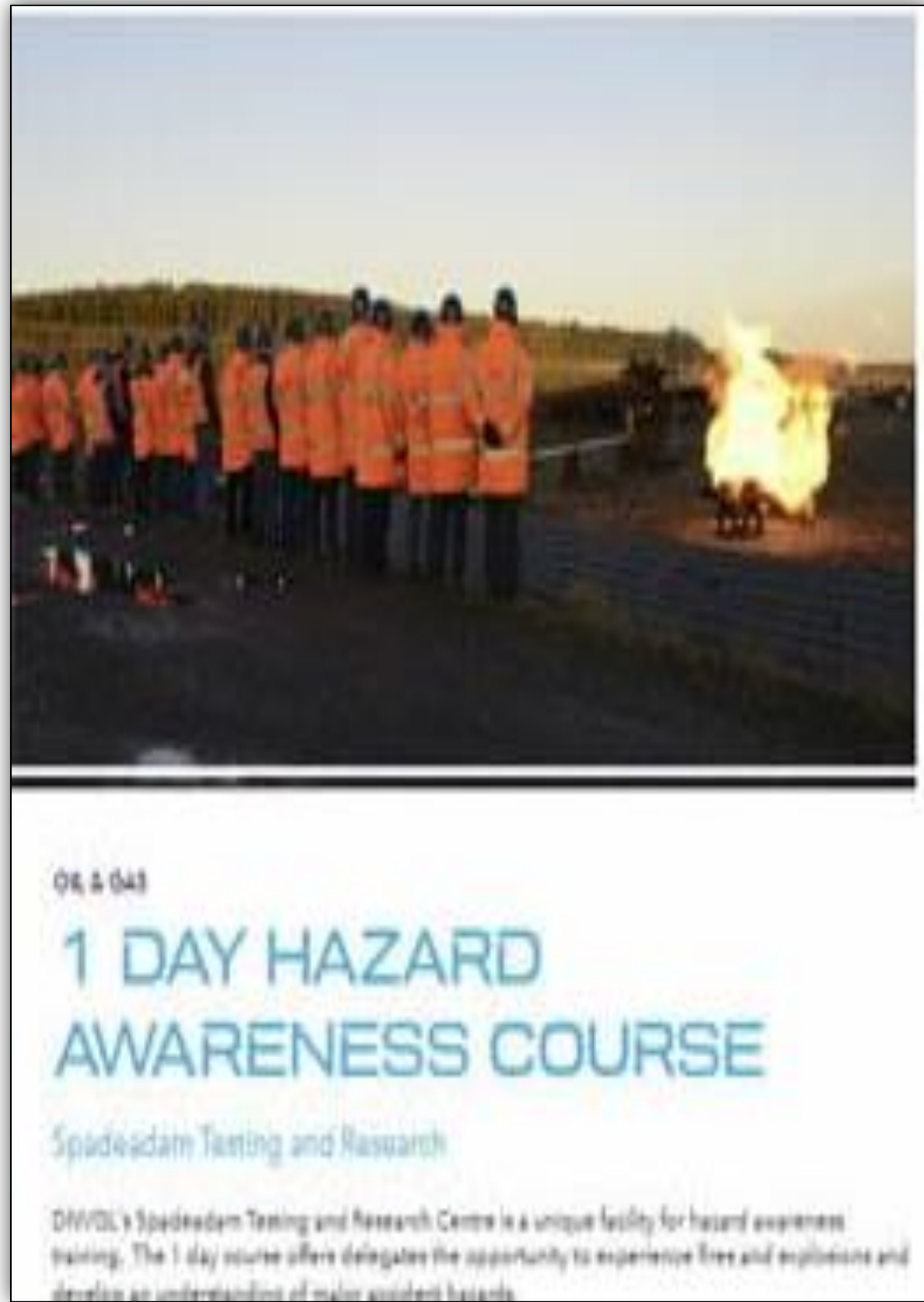
dcbl stadium
Halton

Hazard Awareness Course

Trial Session September 2026

Share
Knowledge
and Good
Practice

- Key outputs:
 - Update to the theory sections to reflect learnings from “real” operator incidents
 - Align and expand on current PERO course thinking
 - Course to run biannually with Good Practice Workshop
 - Process Safety link



Document GPG Review

Recognised
as industry
leaders in
EP good

Review Completion - 4 General Practice Guide's

- **GPG/10** - MAHP Emergency Response Plan: Guidance on Testing
- **GPG/11** - MAHP Emergency Response Plan: Emergency Plan Template
- **GPG/12** - MAHP Emergency Response Plan: Testing and Exercising Pro-forma
- **GPG/16** - Pipeline Hazard Distances
- **TBN/12** - A short review of UK regulatory guidance in the development of and testing of pipeline emergency plans
- **GPG/11** - Rebuilt to reflect good practice across emergency planning landscape.

UKOPA
United Kingdom Onshore Pipeline Operators' Association

Good Practice Guide
Major Accident Hazard Pipeline, Emergency Response Plan, Guidance on Testing
UKOPA/GPG/010 Ed 2
October 2024

UKOPA
United Kingdom Onshore Pipeline Operators' Association

Good Practice Guide
Major Accident Hazard Pipeline Emergency Response Plan Template
UKOPA/GPG/011 Ed 2
October 2024

Environmental Discussion

Produce and maintain Good Practice Guides

- 4 Scenarios
 - Notification - High chance of flooding event.
 - Flood Event – Preparation & Support
 - Flood Event - Catastrophic Failure of Asset.
 - Recovery
- c10 Areas of interest to be assessed / c30 pages
 - Inc: Assessment, Communications, Support, Mobilisation Engagement Recovery etc.
- Working draft
 - Chris Rogerson Technical Author – 14th March
 - final feedback - submission to governance group

Signposting – What to look for, how to remediate

As discussions had taken place in a number of working group meetings regarding river erosion, flooding and associated issues, it was decided to hold a cross working group meeting to agree on a way forward for UKOPA that all of the working groups represented agreed upon – particularly with interlinked documents internally or with external stakeholders.

Areas of interest for repair advice/status

Groups represented

PIWG
Tim Rudd (Chair)
Chris Rogerson
Consultant
Mahail Lazare
Mark McManus (plus IWG)
Akin Oshinowo
FPS
Apologies (but)
Brian Leahy –

- TR proved a pipeline failure

- o How
- o Signpost
- o Regular

Screening – How to prioritise risk and where to focus

- AF questioned where issues occur (bottom of riverbeds or riverbanks). Although both occur most issues with riverbanks
- AMac suggested need to consider:
 - o different modes of
 - o identify threats/priorities
 - o how to inspect,
 - o Also need to know compared to when
 - o How to trend for change
- RP – dredging is a threat they are used and managed
- Suggested the need for a FARWG
- JJ explained issues with what we can do to remediate personnel from pipeline failure
- CR asked about scope a should be included (AF), potential for damage, but
- AMac need for assessment for gas and liquid and timing
- JM outlined EPRWG the Emergency services), good
- AF potential for consider if failure do happen (gas information is therefore not
- AC noted that there were predictions and modelling some modelling on this a screening tool to Fridolin so can't be shared
- FJ/AF the report was assessed options. Trying to pin down flooding severity, return to predict erosion based on
- AMac highlighted need for etc. Also flooding and pipe
- TR agree with need for a
- RP agreed with this, notified
- And flooding issues should comms/valves/data flow
- AO include remediation options i.e. rock permits
- AC clarification on flood damage/flooding – buoy

Emergency – How to react & Provision of an emergency response

PIWG email discussions regarding river erosion / flooding

GNI issues

We're currently at the start of our first one of these in recent memory – the last time we had any River Bank issues was back in 2013, and by the looks of it, the issue we had in 2013 was far more gentle and slow. The current situation has literal meters of river bank being washed away downstream of our pipeline during heavy rain events, and the eroded bank is now about 15m "away" from us, a loss of about 10m since last summer.

The pipe crossing is located at a very geomorphologically active site. We've overlain some recent aerial imagery with the first edition OS map (dated late 1800s) and there are, in places, in excess of 100m of lateral river channel change.

The process we're currently going through is notionally planned as:

- Desktop analysis – looking at the full suite of old maps, aerial photographs, and LiDAR data – to ascertain the historic rates and patterns of river channel change
- Topographic survey of the river channel position, and cross-sections within the river
- Hydrological analysis and stream power calculations
- Site visit
- Modelling of the in-channel flows – to ascertain likely locations, rates and patterns of future river channel change
- Meeting with SEPA to discuss the history of the site and options for intervention
- Development of a conceptual design, including engagement of contractors
- Review of recommendations/proposed way forward

Valero

We're in a similar boat, this is the first time we have had to deal with something like this (I believe previous operator did in late 1990's). For what we're doing, we identified an area of exposed pipeline during manual linewalk. As part of planning repair we wanted to try and estimate rates of bank erosion. First thoughts were to try satellite imagery to measure the river width and get a feel for erosion rates, but given the varying quality of available info and differences in vegetation cover this proved impossible to get an accurate result. Instead, we found that the LIDAR datasets worked well – these can be purchased as shapefiles from sources such as Ordnance Survey. Using LIDAR lets you see through the vegetation to the ground beneath, so gave us a reliable data set.

We're now planning to roll out a check across the network of all river crossings to try and highlight any change in river orientation over time that might otherwise have gone unnoticed. We're looking to use the LIDAR data for this, but also as part of our ongoing line walks will take a geotagged photo from a known reference either side of the bank for visual comparison in the future, and will also look to get an overhead drone shot, again for comparison. The final action we're taking is to run through all known ditch crossings and

Key Document to be developed

Cross Working Group Meeting (PIWG, FARWG and EPRWG)

- Signposting – What to look for, how to remediate – PIWG
- Screening – How to prioritise risk and where to focus – FARWG
- Respond & Recover – How to react / emergency response, EPRWG



- Potential incident management training for leaders in organisations
- Human factor implications on those who are involved in incidents.



- How do we build best practice Cyber Resilience ?
 - Good Practice Guide ?



- Operators working with HSE on proactive plan testing and Local Authority interaction

Thank You