

Flood Risk and Preparedness: Launching a new working group for the North West region

Are you prepared for the worst?

As we experience more frequent flooding across the UK, it's never been more important to make the necessary preparations to deal with the consequences of flooding, in and around your site. Climate change and increasingly common extreme weather means it's likely that many more companies in the Northwest area will have a greater risk of being affected by flooding in the future.

Under the COMAH Regulations 2015, flooding is recognised as both an initiator and escalation factor of major accidents. Recent flood events that have put pressure on industry and emergency services mean that flood preparedness for Major Accident establishments is currently recognised by the Environment Agency, the Government and Industry as a high priority.

In the River Mersey region, there are 40 COMAH Establishments (38 Operators) at risk of flooding, and 83 sites (78 Operators) across the Northwest. With 22% of UK chemical companies based in the Northwest, the potential effects of a flood event to the supply chain could be severe.

Emergency Planning under COMAH

Different flood types, e.g., rivers, the sea, or reservoirs, can present different risks to sites. This means that even if your site is not directly on the coast or the banks of a river, flooding could directly or indirectly affect site activities or key risk controls such as emergency response.

COMAH Establishments at risk of flooding have been categorised by the UK Environment Agency according to four Flooding Major Accident Scenarios (FMAS1-4).

Flood Major Accident Scenario (FMAS) criteria encompasses the following:

- Major Accident Scenario directly initiated by flood event (site level)
- Flood event prevents on-site ability to respond to a Major Accident Hazard (internal emergency plan)
- Flood prevents access to site (external emergency plan)
- Flood elsewhere restricts response (national or regional level)

Operators are required to identify and characterise the flood risk to their establishments (both direct and indirect) and implement all appropriate risk reduction measures so far as reasonably practicable.

Under Competent Authority flood preparedness inspections, operators who are potentially affected by the direct and indirect effects of flood zones from rivers, the sea or reservoir failure (i.e., those in all FMAS categories) are increasingly being asked to complete a Flood Risk Assessment to ensure they are suitably prepared. New planning applicants in FMAS Areas will also need to do this as part of the planning process.

Typical flood risk assessment activities would involve:

- Refinement of flood mapping
- Consideration of potential hazards
- Identification of further measures, as required;

As with all risk assessment activities, the detail of the assessment should be proportionate to the perceived level of risk.



Completion of additional risk assessments for upper and lower tier sites

A guideword-led Flood Hazard Identification Study can be utilised to identify all potential initiators and escalation factors for a part or all of a COMAH establishment. Correctly applied, the study can identify both natural and artificial causes of flooding on an establishment, supplemented by additional risk assessment.

The outcomes of such assessments will allow the development of flood preparedness at the site, to include:

- Information to allow sites to assess the unmitigated and mitigated flood risk and potential effects on site.
- A regular review of the suitability of existing measures in place to prevent, control and mitigate the initiation or escalation of major accidents that may be challenged or affected in the event of a flood.
- Consideration of any early warning information available for a flood event and allow development of recovery plans following an event.

Learning and continuous improvement

Remember, environmentally-based hazard studies are relatively new compared with industry standard methods, e.g., HAZID, HAZOP (HS2/3), and require a different way of thinking to traditional process safety risk assessment.

Industry may not get this right first time, so it is important to find opportunities to learn and understand how your site could be affected; to identify actions and drive improvement where needed.

Where to start? Join our working group!

In collaboration with Chemicals Northwest, SLR Consulting Ltd invites you to be part of a new quarterly Working Group on the topic of Flood Risk.

The group will provide opportunity to share thoughts, experiences, and present ideas to support companies across the Northwest region to continually improve in this important area.

We welcome representatives from across the supply chain to be involved, to make the discussion diverse and interesting for all.

To register for the working group, please go to the events section of the CNW website <https://www.cia.org.uk/chemicalsnorthwest/CNW-Events>.

Once you have, we will send the invite so you can join us virtually for our first meeting in September to learn more about how you can get involved.

SLR Consulting Ltd

SLR Consulting are well placed to offer full flood life cycle assessments that can be tailored to the specific requirements of the site. We can provide support through the provision of aforementioned studies, refined mapping, topographical surveys, secondary / tertiary containment studies, environmental risk assessments (utilising the CDOIF guideline) and the development of restoration / remediation plans.

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