Chemicals northwest

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Autumn 2025

A spotlight on the vibrant north west chemicals sector

# Elements

## In this issue:



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# Contents Autumn 2025



## Membership

**Would your company benefit from joining an organisation that supports and promotes the chemistry-using sector in the Northwest? Do you want to understand more, and contribute to, the industry issues within the region?**
If you are a manufacturer, chemical user or offer products and services to the sector, why not join us today?

https://www.cia.org.uk/chemicalsnorthwest/Membership/Benefits-Costs/

**2025 rates.** ***(from 1st April 2025)***

| | | |
|---|---|---|
| Micro corporate membership | (1 - 10 employees) | £500.81 + VAT |
| Standard corporate membership | (11-100 employees) | £ 871.07 + VAT |
| Large corporate membership | (100+ employees) | £1108.53+ VAT |

*Our membership year runs from 1 April to 31 March. A pro-rata basis usually applies to joining at other times in the year and we'd be happy to discuss on application.*

# Welcome

Dear Reader,

We hope you had a very enjoyable Summer and we are delighted to bring the Autumn edition of Elements to you with the latest roundup from our members.

The Elements magazine is always a fascinating roundup of features from the sector. This edition is no exception. We have focuses on Hazard studies, UK REACH, Cyber security, Biotechnology features and Patenting, Award winners, an interview with ReAgent's CEO, Rich Hudson, the Children Challenging Industry (CCI) Programme in the North West, successes from Sci-Tech Daresbury with two Leading environmental firms joining Sci-Tech Daresbury, plus pumps and valves and the very intricate parts of chemical manufacturing that are crucial to operations.

At the time of going to print with the Summer edition of Elements, we were about to host our June breakfast networking event. This took place on the 11th June with three fantastic speakers presenting. Dr James Titterington, Business Development Manager (NW) for DipHex Solutions Limited spoke about chemical incidents and asked "Is your current chemical first aid good enough?" James also brought along a practical/visual demonstration to complement his presentation slot. We were joined by Seona Turner – UK Head of Process Safety from PM Group. Seona spoke about Pressure Relief Devices: Evaluation of PRDs for existing facilities. Our final presenter was Rebecca Howarth, Head of UK and European Manufacturing from Adepto Technical Recruitment. Rebecca presented about how Freelancer models are increasing, how to protect your business and create a risk and cost avoidance model with an auditable trail. Our next breakfast event is planned for the 17th September and we will feature the write up in the Winter edition of Elements.

Our next Sustainability event will be hosted in Daresbury on the 25th September. At the time of going to print, we had SLR in place to facilitate the event, Abdul Muqeem, MSc, PhD (Doctoral Sustainability Researcher) - Course Leader for MSc International Business, University of Chester will be presenting about how Sustainability reporting has gained increasing significance within the chemical industry, especially in the United Kingdom, and Dr Ruth Duberley, Advisory Teacher in the North West for the Centre for Industry Education Collaboration due to present to the audience. Ruth is due to share her experiences and will be discussing how to share your sustainability messages within and beyond your community. We will feature the write up in the Winter edition of Elements.

We also have an event in the pipeline in conjunction with WSP for the 23rd October which will focus on Regulations and updates. A write up on this will be featured in the Winter edition of Elements.

We will also be launching our awards in the next few weeks so keep your eyes peeled and have your thinking caps on ready to take part in the award entry process and share your good news stories and achievements with the sector.

As always, please keep your good news stories, case studies and thought leadership articles coming in to be featured in Elements.

**Alex Abraitis - Member Services and Events Manager**

# *About us...*

Chemicals Northwest is an established business network owned by the Chemical Industries Association.

With around 130 members we actively promote this important regional sector and our objective is to

help membership to grow through;

- facilitating networking events, common interest groups and interactive workshops, all aimed at covering topical industry issues.
- supporting projects and programmes that identify and enhance business performance and generally support continuous improvement across the sector.
- promoting science and engineering based skills, helping to address the region's future needs.
- improving the image of the industry overall, including generating a positive reputation, through communicating achievements and success.
- contributing to the industry's strategic voice and the national growth agenda aligned to the work of the Chemical Industries Association.
- connecting the community of chemistry-using businesses and the vital supply chains here in the Northwest.

**Here are the main features and benefits of membership...**

- Annual Awards Dinner
- Breakfast Networking events
- Partner Events
- Common Interest Groups
- Quarterly Elements Magazine
- Website promotion and profiles
- Monthly E-bulletin & ad hoc bulletins with latest sector information
- LinkedIn Groups

**Find out more here - https://www.cia.org.uk/chemicalsnorthwest/membership**

# Yordas Group Awarded King's Award for Enterprise in International Trade

Yordas Group, a leading provider of scientific consultancy services and digital solutions for the sustainable management of chemicals, is proud to announce it has been honoured with a King's Award for Enterprise in International Trade.

This prestigious award recognises the outstanding expertise, dedication, and leadership of Yordas Group's consultants, who enable businesses worldwide to achieve safe and sustainable global product marketability. Our highly skilled team of regulatory scientists, hazard communication specialists, chemists, toxicologists, environmental experts, data scientists, and social scientists was central to the recognition awarded by the King's Committee.

*King Charles and Jonathan Lutwyche at Windsor.*

Jonathan Lutwyche, CEO of Yordas Group, commented:

"We are deeply honoured and proud to be chosen as a King's Award recipient in International Trade. It is a significant achievement that reflects the quality and depth of our team's expertise and our commitment to supporting our clients through world-class science".

The King's Awards for Enterprise are the United Kingdom's highest official recognition for business excellence. Recipients are personally approved by His Majesty the King following rigorous evaluation and hold the honour for five years, earning worldwide respect as exemplars of UK industry.

Yordas Group enables companies worldwide to navigate complex chemical and product regulations, turning compliance into a platform for innovation, resilience, and competitive advantage. Through our integrated Consultancy Services and our flagship digital platform, Yordas Helix, we empower clients to balance regulatory requirements with their sustainability ambitions.

Rooted in the north of England, Yordas proudly shares this success with the vibrant research, business, and educational communities of the region. Our close collaboration with universities, research institutions, and local businesses underscores our commitment to nurturing talent and driving innovation at home and abroad.

Building on this recognition, Yordas Group will continue to drive the future of sustainable chemicals management, advancing new digital solutions, championing sustainable alternatives, and partnering with global industry to shape a world where regulatory science accelerates safer, more responsible product development. We are committed to setting new benchmarks that protect human health, safeguard ecosystems, and enable sustainable economic growth.

This award honours not only Yordas Group's vision but the passion, expertise, and loyalty of every member of our consultancy team. Their commitment to excellence will continue to define the next chapter of our leadership journey.

***For further information, visit https://www.yordasgroup.com/***

RAS

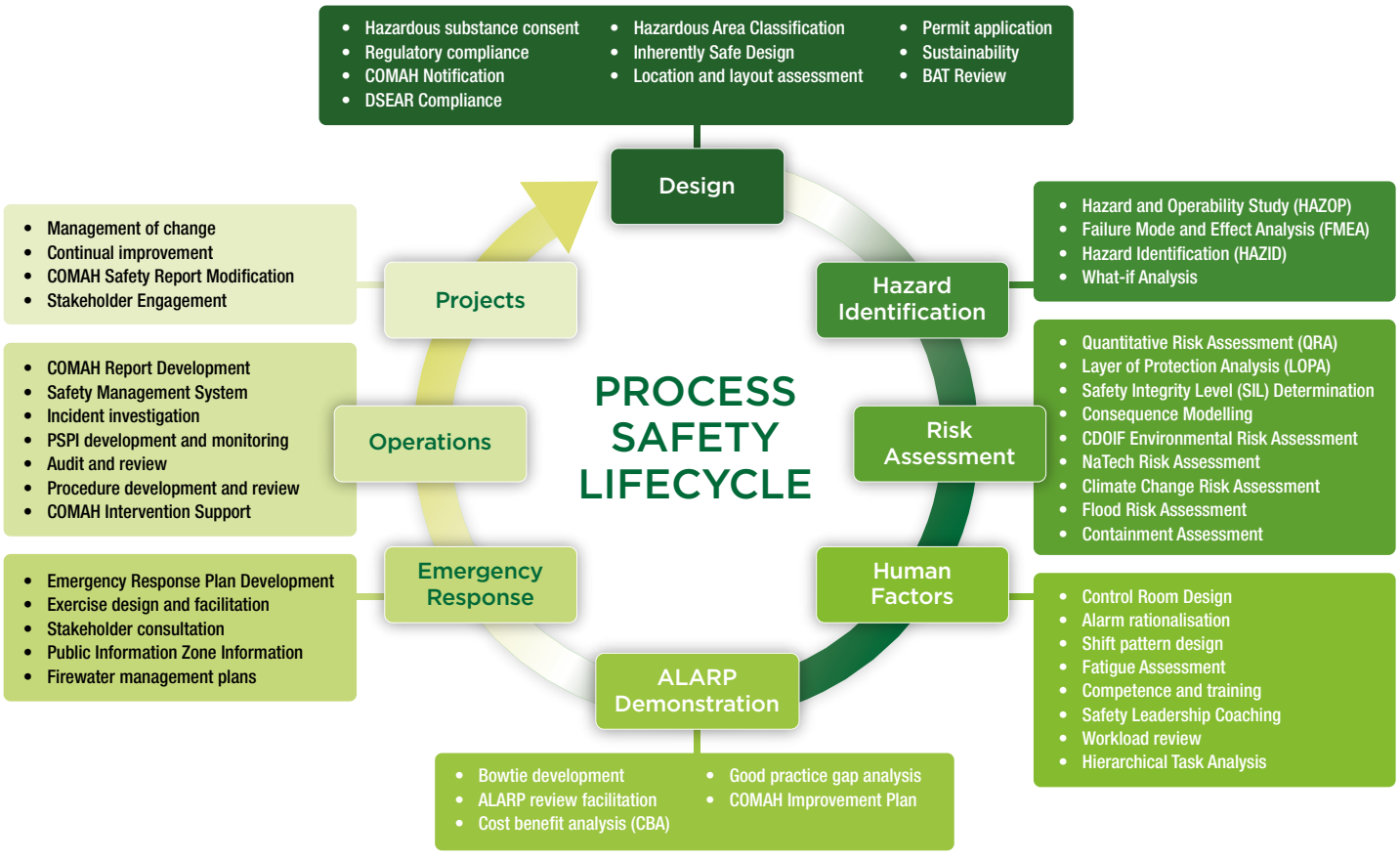
Safe | Smart | Sustainable

RAS Limited is a well-established, specialist risk consultancy working with an extensive portfolio of large corporate clients which manage complex industrial sites and businesses. Our team of expert consultants have experience in a wide range of sectors - from pharmaceutical to energy, aviation and specialist chemical sectors.

We are a Chester-based company with a national and international client list. We work differently because of our great team of specialists. Our multi-disciplinary approach to solving challenges enables us to stand out from the crowd. We are passionate about supporting industry to be safer, smarter and more sustainable.

People are the centre of everything we do. We do not believe in off-the-shelf solutions. We partner with our clients to find the best solution for their particular challenges and businesses.

# PRODUCTS AND SERVICES

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# Playing Matchmaker – Finding the Right Hazard Study for you

HAZOP is a well-established tool widely used across the chemical industry to identify hazards and improve operability – but it is not the only tool at our disposal. At RAS, we often receive client requests for HAZOPs and, after further discussion, determine that another technique may be better suited to their needs.

Selecting the right hazard study will give you more effective outcomes and make the best use of your team's precious time. Within the process safety toolkit, there are many tools to identify hazards including:

- Hazard study 0 and 1
- HAZID
- HAZOP
- What if analysis
- Hazard study 4 and 5.

Each method has specific strengths and is typically suited to different project stages. Using the correct study at the right time supports effective risk management and compliance with regulatory expectations. An inappropriate technique or poorly executed study can undermine your entire risk assessment, resulting in missed hazards and poor decisions.

Hazard identification is the foundation to managing major accident risks. Whether you operate a small facility or a complex plant, a tailored hazard study can provide assurance that risks are effectively controlled. In addition to identifying risks, these studies can streamline operations, highlight the need for further analysis, and engage the workforce in process safety.

**HAZOP**

A HAZOP (Hazard Operability) study is a systematic examination of all the processes and systems to identify any hazards to people, plant and processes.

It is best suited for use once detailed P&IDs are available—typically toward the end of the design phase or for existing facilities. The technique involves systematically identifying deviations in process parameters to uncover hazards.

The length of the HAZOP will depend upon the complexity of the process to be studied – a revalidation process for a complex plant may take many months whereas a more straightforward system may take a few days.

**HAZID**

A HAZID (Hazard Identification) study is particularly effective at identifying your hazards at an early stage of a project.

The top -down approach used only requires an overall of the process and typically follows a PFD. The study documents the broad hazard types, inherent to the substances or the processes performed. By highlighting risks early, HAZID allows safer, more cost-effective design decisions before detailed engineering begins.

**Other Techniques**

Other methods may be more suitable depending on your objectives and the stage of your project. What-if analysis, for example, uses structured brainstorming to explore potential risks by asking hypothetical questions. It's simpler than HAZOP and often used during the concept phase to uncover early-stage hazards.

Some projects benefit from a full suite of hazard studies—from Hazard Studies 0 and 1, which focus on inherent safety, through to Hazard Studies 4 and 5, which examine commissioning and operational phases. This comprehensive approach ensures that risks are identified and managed throughout the project lifecycle.

**Finding the Right Fit**

Choosing the most appropriate hazard study saves time, avoids duplication, and ensures your risk assessments are robust. Not every project requires a HAZOP—and using one where it doesn't fit may waste time and provide limited value.

At RAS, we focus on delivering tailored, proportionate hazard studies. We will not recommend a HAZOP unless it is the most suitable tool for your circumstances. Our experienced team provides guidance on selecting the right method—whether it's a full-scale HAZOP or a simpler What-if analysis—ensuring your process safety approach is effective and efficient.

***For further information, visit www.ras.ltd.uk***

# PRD evaluation of existing facilities: Is your site protected?

In today's chemical manufacturing landscape, evolving processes and tightening compliance standards mean that legacy safety systems may no longer be suitable. Pressure Relief Device (PRD) evaluations are not just a regulatory checkbox, they're a strategic safeguard to protect people, assets and reputations.

At PM Group, our process safety specialists tailor PRD evaluations to site-specific needs, helping manufacturers ensure their safety systems remain effective and compliant. As Ryan Byrne, Group Head of Pressure Relief Design at PM Group, explains, *"Understanding the design basis of each relief device is crucial, not just for compliance, but for operational resilience."*

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### What is a PRD Evaluation?

A PRD, such as a relief valve or burst disc, is a critical safety component which protects against equipment and systems failure by relieving overpressure in cases of emergency pressure increases. PRD evaluation compares installed relief systems against current standards and best practices. This ensures they remain suitable for the current process they protect. It captures changes made since installation, provides detailed design basis information and confirms the ongoing suitability of each device.

Importantly, evaluations consider the full pressure envelope; the PRD and the system of equipment, vessels and pipework it is protecting. This approach identifies pressure drops across inlet and discharge lines and assesses how process changes may impact PRD performance.

### Why it matters?

Many risks are associated with not having relief systems appropriately designed. For example, incremental changes to a process may render a PRD unsuitable. For a site with a significant number of PRDs, the overall safety risk due to such small changes is increased. Evaluations help uncover these hidden vulnerabilities before they become incidents. Other drivers for PRD evaluations include:

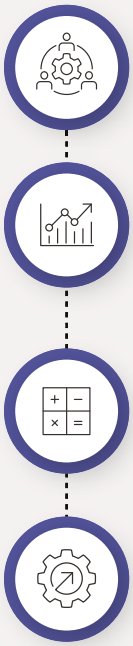
1. **Compliance**
   Changes in company standards, internal audits and alignment with best practice guidance can drive design compliance requirements. Demonstrating compliance can provide opportunities for chemical sites. For example, a well-documented, current evaluation programme not only showcases compliance but also reflects strong process knowledge. This can improve opportunities for better terms with insurance providers.

2. **Safety Culture**
   Companies often initiate evaluations in response to safety incidents, which can expose underlying weaknesses in safety culture. A comprehensive PRD evaluation programme can drive positive cultural change, reinforcing the importance of proactive safety management.

3. **Change Management**
   Over the life of a facility, changes may happen without considering their impact on the suitability of the PRDs protecting it. Without PRD evaluation, these impacts can remain unknown. An evaluation programme resolves issues such as incomplete or missing relief dossiers. When changes need to be assessed and implemented, having accurate design basis information for PRDs allows informed decisions to ensure ongoing suitability.

### Successful evaluation exercises

There are four key steps to a successful evaluation exercise. These steps can be planned and agreed upon to fit within a company's manufacturing and budgetary requirements.



**Preparation**
- Review Scope and Timeline
- Pressure Relief Philosophy & Methodology

**Data Gathering**
- Existing Documentation Review
- Site Survey
- Data Gap Filling

**Calculations**
- Credible Overpressure Scenarios Review
- Orifice Sizing Calculations
- Piping Pressure Drop Calculations
- Vent Header Sizing

**Output**
- Identify Result of PRD Evaluation
- PRD Documentation Packs for all Devices

**PM Group Expertise**
PM Group has a dedicated team of PRD specialists. We provide expert knowledge to evaluate relief systems while minimising disruption to existing site facilities and installations. We understand that PRDs are not directly involved in production, making cost justification a challenge. However, their role in safety is critical.

> **"Our experience allows us to establish an effective execution programme that efficiently brings sites up to standard, aligned with budgets, to help keep them protected."**

**Ryan Byrne**
Group Head of Pressure Relief Design
PM Group

Architects
Engineers
Project Managers
Constructors

# Process Safety

## Technical expertise and compliance support for new and existing facilities

Handling hazardous substances requires significant levels of integrity of operating systems and processes. Our specialist teams deliver integrated, regulatory compliant, cost-effective solutions in the following areas:

- Process Hazard Analysis
- Layer of Protection Analysis (LOPA) / Safety Integrity Level (SIL) Reviews
- ATEX / DSEAR: Hazardous Area Classification Explosion Protection Document (EPD)
- Consequence Modelling
- Quantitative Risk Assessment
- Occupied Building Risk Assessment
- COMAH/Seveso: Major Accident Prevention Policy and Safety Report
- Pressure Relief Device Design

**Contact us for support with your process safety requirements:**

Call: +44 1928 752 500 / Email: processsafetyrequests@pmgroup-global.com / www.pmgroup-global.com

# UK REACH: Navigating Compliance in a Shifting Regulatory Landscape

**Abstract: Turning Compliance into Collective Action** - As the UK REACH framework continues to evolve, the time for passive observation is over. With new consultations, shifting deadlines, and increasing regulatory complexity, the chemical industry must act decisively. This article is a call to arms - for consultants, regulators and those within industry - to collaborate, communicate, and commit to a shared goal: ensuring that the UK remains a global leader in chemical safety and compliance.

**Introduction**

Since its initiation in January 2021, the UK REACH regulation has governed the manufacture and import of the majority of chemical substances, substances in a mixture, or substances that make up articles in Great Britain. While the regulation mirrors the EU REACH framework in structure, UK REACH has evolved with its own legal instruments and compliance pathways. As we move through 2025, that regulatory landscape continues to shift, demanding vigilance, adaptability, and strategic foresight from industry stakeholders.

**Latest Developments: July 2025 Consultation**

On 14th of July 2025, the UK Department for Environment, Food & Rural Affairs (Defra) launched a public consultation proposing an extension to the transitional registration deadlines under UK REACH. This move reflects the continued ongoing development of the Alternative Transitional Registration model (ATRm) and aims to give industry more time to prepare for compliance.

Three options are under consideration:

Option 1: October 2029, 2030, and 2031

Option 2: April 2029, 2031, and 2033

Option 3: April 2029, 2030, and 2031

Stakeholders, including manufacturers, importers, and downstream users have been invited to submit feedback by 8th of September 2025. However, whilst moving in the right direction with the ATRm, the outcome of this consultation held last year (May to July 2024) is still pending, and this may only add to the confusion and frustration that appears to be hovering like a grey cloud over the UK chemicals industry at the moment.

**Key Compliance Considerations**

Recent attended events this year such as CHEMUK (MAY 2025), and Enhesa's UK Chemicals Regulation & Policy (June 2025); were very much relaying the same message across the board – *"the UK is craving guidance and structure in terms of its chemical regulation, and we want action."*

Several critical compliance themes have been noted and reinforced:

**Understanding Legal Roles Post-Brexit:** GB-based downstream users sourcing from the EU are now considered importers under UK REACH and therefore must register accordingly.

**Registration Deadlines & Fees:** As of 1st of April 2025, updated UK REACH charges apply. These include flat fees for large companies and revised structures for SMEs.

**DUINs & NRES:** Transitional mechanisms such as Downstream User Import Notifications (DUINs) and New Registration of an Existing Substance (NRES) remain vital tools for maintaining market access and should be used where applicable whilst they remain available.

**Client Engagement & Internal Readiness**

During recent months, WSP has put together a roadmap to help you navigate your path to UK REACH compliance through the uncertainty, and we're confident it can be done!

The focus is on reviewing and understanding legislative changes, and performing, where relevant and necessary, client-specific updates, ensuring our clients are informed of regulatory shifts and supported through compliance transitions.

**A Call to Action**

The UK chemicals industry will no doubt await the outcome of the consultation with apprehension and deliberation, but we do know a few things for certain.

**The UK REACH deadlines will change** *(again)*

We need to make use of this time now, before the revised deadlines, to ensure compliance.

We're in this together so we need to act with professional empathy, where possible!

Try to think of it as this being our grace period, a window of time to be used sensibly and proactively. WSP would strongly encourage all UK-based manufacturers and importers to review your substance portfolio, identify key substances that require registration under UK REACH, noting potential changes in volumes (increases, and decreases), and be aware of substance classifications according to CLP, as this could impact registration deadlines.

Where applicable, gather your analytical data, and prepare your report for the substance identification (this is needed as part of the registration dossier).

You then need to identify which of your substances, if any, are eligible, and take advantage of the transitional measures; (late) DUINs, or NRES.

Other substances not eligible for DUINs or NRES, will require immediate registration.

You could even go one step further and prepare and submit your Inquiry Dossier. This will not trigger a HSE invoice, but rather it will place you into the Substance Groups (think SIEF, under EU REACH), where you will be able to take part in the dialogue with other registrants of the same substance, and potentially be able to discuss Lead Registrant nominations and potential data sharing.

Whether you tackle your UK REACH Registration obligations on your own, or with the aid of a consultant, or via an Only Representative (OR), the main message is this – use this time wisely, to assess your substance portfolio, and act accordingly to bring yourself into compliance, the HSE are currently being supportive  they would rather allow you the opportunity to become compliant now, rather than punish industry for non-compliance, but this may change as the deadlines become definitive and we inevitably move ever closer to them.

**Conclusion: The time is now**

The UK REACH framework is not just a regulatory hurdle; it's an opportunity to lead. As consultants, we must guide our clients with clarity and confidence, and as an industry, we must speak with one voice to shape a practical, science-based, and globally aligned regulatory future.

**Now is the time to act:**

Engage with the Defra consultations when the opportunity is presented.

Understand the importance of UK REACH obligations and timelines, as they continue to develop.

Collaborate across sectors to ensure the UK's chemical industry remains resilient, compliant, and competitive. Let's not wait for compliance to happen to us – let us lead it.

The WSP Chemical Compliance Team has expertise in both the REACH and CLP regulations. **If you need support ensuring compliance with the requirements, you can contact REACH@wsp.com**

*Article written by Amy Fearon, Associate of Chemical Compliance at WSP*

# Soil Treatment Hubs: A Sustainable Solution for Managing Impacted Soils in the Chemical Sector

As chemical manufacturers navigate regulatory obligations and asset lifecycle changes, soil treatment hubs, often operating under a CL:AIRE-compliant "Hub & Cluster model", offer a sustainable and commercially viable approach to land remediation. This article outlines the concept, benefits, and key considerations, particularly for those managing legacy contamination or responding to statutory notices.

**The Treatment Hub Concept**
A soil treatment hub serves as a central site where materials from several nearby donor sites can be remediated before reuse at development sites (receiver sites), avoiding landfill and supporting circular material use. This approach, supported by CL:AIRE's Code of Practice (CoP), enables hazardous or surplus soils to be treated ex situ at a hub site and then reused under clearly defined, legally compliant conditions without requiring environmental permitting at each receiving location.

Originally conceived to unlock economic remediation of former gasworks, the hub model has evolved into a versatile solution for landowners and developers, including chemical manufacturers, particularly where multiple sites face similar issues or are co-located regionally

**Relevance to Chemical Operators**
Soil treatment hubs are particularly relevant for operators of current or former chemical sites dealing with:

- Regulation 61 notices under the Environmental Permitting Regulations;

- Part 2A designations, identifying land as statutorily contaminated;

- Process change or decommissioning activities that generate surplus or impacted soil.

Rather than remediating each site in isolation, soils can be transported to a permitted treatment hub and reused under a Cluster arrangement. This reduces regulatory burden, cuts disposal costs, and promotes compliance with the waste hierarchy. Once treatment is verified, the material ceases to be classified as waste, removing the need for onward duty-of-care documentation.

**Benefits: Environmental, Economic, and Social**
**Environmental Gains**
Treatment hubs reduce emissions by optimising logistics, minimising reliance on virgin aggregates, and significantly cutting landfill use. Case studies, such as those published by CL:AIRE, have shown reductions in haulage distances, fuel consumption, and carbon footprint of over 75%.

**Economic Efficiencies**
By centralising treatment activities, operators benefit from economies of scale, reduced permitting requirements, and lower material import costs. In some scenarios, this makes otherwise marginal landholdings viable for reuse or disposal.

**Social and Reputational Value**
Addressing legacy contamination proactively can enhance ESG credentials and unlock brownfield land for regeneration. This is especially impactful for communities historically affected by industrial use, where improved land quality can support wider redevelopment goals.

**Key Considerations**
**1. Regulatory Alignment**
Hub sites must operate under an Environmental Permit, and the broader Cluster must comply with the CoP. Materials Management Plan (MMP) and tracking system ensure traceability from donor to receiver sites, with oversight by a CL:AIRE-qualified person.

**2. Planning and Flexibility**
Planning consents should accommodate fluctuating volumes and the addition of new sites to maintain viability. Early engagement with planning authorities and the Environment Agency is recommended to address any site-specific issues.

**3. Material Suitability and Exclusions**
While treatment hubs can handle a broad range of impacted soils including hydrocarbons, heavy metals, and asbestos in soil, they are not suitable for all contaminants. Certain substances either exceed treatment capabilities or present a risk of cross-contamination.

***Key exclusions include:***
**PFAS** (per- and polyfluoroalkyl substances): These highly persistent and mobile compounds cannot be effectively treated using standard soil washing, bioremediation, or thermal methods typically available at STCs. Specialist techniques such as high-temperature incineration or plasma destruction are required and are rarely permitted at hub facilities.

**Liquid Free-phase hydrocarbons** (LNAPL/DNAPL): Although hydrocarbons are often treatable, free-phase product typically requires in situ remediation due to migration risk and treatment limitations at hub facilities.

**Radioactive contaminants:** Naturally occurring radioactive materials (NORM), radium, or legacy industrial waste with radiological impact are regulated separately and unsuitable for conventional hub processing.

**Uncharacterised hazardous waste:** Materials lacking clear origin or contamination data may be rejected due to permit constraints and environmental risk.

**4. Documentation and Governance**
The MMP must demonstrate how materials will be treated and reused within defined quality and risk thresholds. Where treated soils are reused, the Qualified Person's declaration ensures they are no longer considered waste. This structured, auditable process gives regulators and stakeholders confidence in the integrity of the system.

**Supporting the Sector**
John F Hunt Regeneration has delivered successful remediation strategies using the Cluster model across high-risk brownfield and industrial sites. Our experience in complex soil behaviour, stakeholder liaison, and regulatory navigation allows us to support chemical sector operators through the entire lifecycle of land reuse, from investigation and permitting to treatment and verification.

For operators managing impacted soils across a portfolio of legacy or live sites, soil treatment hubs represent a pragmatic, cost-effective, and environmentally responsible solution that meets the evolving demands of compliance and sustainability.

***For further detail contact***
***https://www.johnfhuntregeneration.co.uk/***

# The Lingering Liability of Legacy Contamination: A Holistic Approach to Environmental Liability Management from PFAS at Manufacturing Facilities

PFAS are a group of > 10,000 chemicals which have unique properties and are chemically and thermally stable. They have found use in firefighting foams, process chemicals and consumer products. PFAS may be present in aquifers and are an environmental liability left by industry at many operational and former sites dating back decades from widespread use. Industrial sites often bear the environmental imprint of multiple phases of development, evolving industrial processes, and historical practices that predate modern environmental regulation including permitting regimes. Scientific understanding and regulations around PFAS also continue to evolve. As such, there are challenges for managing environmental liability - particularly in the context of permit surrender and site redevelopment - requires a pragmatic and forward-looking approach.

**The Complex Legacy of Chemical Sites**

Unpicking the history of legacy and operational chemical sites is rarely straightforward. They often comprise a patchwork of historical operations, undocumented waste disposal practices, and infrastructure that has been repurposed or lost over time. This complexity makes environmental assessment and if required, remediation particularly challenging. Site investigation and remediation around ongoing operations while meeting regulatory expectations requires robust site characterisation and a pragmatic view to remediation. While traditional contaminants like hydrocarbons and chlorinated solvents tend to be associated with identifiable point sources - such as leaking tanks, sumps, or process lines - emerging contaminants like PFAS present a more diffuse and insidious risk.

**PFAS: A Ubiquitous and Persistent Problem**

PFAS have increasingly become a focus of environmental liability discussions in recent years. Unlike other process related contaminants, PFAS are not likely to be confined just to specific spill locations. Their widespread use in fire-fighting foams (AFFF), suppressants, cleaning fluids, surface treatments, building materials (concrete) and other industrial processes means they can be found across entire sites, which presents a unique challenge for assessment and remediation. Acknowledgement of PFAS as a risk is relatively recent, with limited records of storage and usage, which can be often anecdotal. These chemicals were therefore not included in permit baseline investigations, which increases the complexity of assessment. PFAS are also often present on sites where their use was not central to production and are potentially ubiquitous.

**Regulatory and Technical Challenges**

The UK regulatory framework is evolving to address PFAS. Regulators have issued guidance on PFAS monitoring and risk assessment: however remediation standards are site-specific – one size does not fit all. This regulatory uncertainty places a burden on operators to adopt precautionary, site-specific approaches. In the case of permit surrender or variation the approach is not risk based and the very presence of PFAS at any concentration will be of concern to the regulator.

PFAS are notoriously difficult to remediate, thanks to their thermal and chemically stable nature. Conventional methods such as pump-and-treat (for groundwater) or in-situ stabilisation manage the issue but may be ineffective in the longer term or prohibitively expensive. Emerging destruction technologies show promise but are not yet widely deployed or validated for large-scale use. Only soil excavation can currently remove PFAS liability.

**Permit Surrender and Redevelopment Implications**

PFAS contamination introduces a new layer of complexity for operators seeking to surrender or vary environmental permits or redevelop legacy sites. Demonstrating that land is in a “satisfactory state” under a permit surrender requires comprehensive site investigations that account for both chemicals identified in the baseline and emerging contaminants like PFAS.

Action plans for redevelopment must also consider the long-term management of residual PFAS contamination, including potential restrictions on land use, groundwater abstraction, and construction practices which may disturb PFAS left in the ground.

**The Future of Legacy Liability Management**

The chemicals industry continues to modernise and decarbonise, leading to an increasing need to address the legacy of PFAS and other permitted or risk driving contaminants. This is not just a regulatory obligation, but is a critical step in good environmental stewardship.

Risks from process chemicals, including chlorinated solvents and hydrocarbons, have routinely dominated clean-up efforts for the last 25 years. The next 25 years are likely to have an additional focus on PFAS and it is likely be the contaminant which defines the future of environmental liability management.

***Dr Lawrence Bowden – Senior Principal***
***Jim Wragg – Senior Principal***

**Visit https://geosyntec.com/ for further details.**

Geosyntec consultants

# Find the gaps, plan the fix—and secure operations

When the taps ran dry and signalling lights blinked out last winter, few stopped to ask why. In fact, beneath the veneer of modern convenience lies a growing menace: cyber-attacks that reach beyond stolen data to physically disrupt our most vital services. In the UK this year, everything from water treatment works to Tube control rooms has felt the sting of digital intruders probing the delicate junction where corporate IT meets industrial OT (Operational Technology).

**A rising tide of disruption**

The National Cyber Security Centre (NCSC) sounded the alarm early in 2025, warning that state-aligned groups continue "enduring and significant" campaigns against critical national infrastructure. Meanwhile, incident trackers paint an alarming picture: more than a thousand sites suffered outages or impairment in 2024—over a third more than the year before—many driven not by hardware failure but by malware-driven mischief.


Consider Southern Water, whose network was infiltrated by the Black Basta ransomware gang in February. Although no toxins tainted our drinking supply, key monitoring dashboards went dark, and engineers spent days reverting to manual checks to keep reservoirs safe. Thames Water, too, found legacy control units—some installed in the 1980s—exposed via unsecured remote links, a sobering reminder that "air-gapped" systems are often more porous than their reputation suggests.

**When trains stall and signals fail**

Across the Thames, Transport for London (TfL) faced its own problems. In late 2024 an intruder slipped past perimeter defences and into the OT segment that controls signalling maintenance—forcing staff to implement paper-based workarounds. Commuters may not have noticed on the Oyster gates, but hidden behind the scenes, every delay chipped away at TfL's resilience and reputation.

An insurance report from Chaucer estimated that UK utility companies alone endured 48 successful cyber-attacks in 2023, a 586% jump from 2022. Though many targeted data networks, the lure of OT gateways is growing ever stronger.

**High-hazard heat**

Beyond water and transport, Europe's high-hazard manufacturers have learned this lesson the hard way. In early 2024, Germany's VARTA Group was forced to idle five battery-cell plants when attackers jumped from IT servers into production networks—halting output for electric-vehicle and grid-storage markets. And while the infamous LockerGoga strike at Norsk Hydro dated back to 2019, its lesson remains vivid: ransomware can encrypt backup systems as easily as live controls, leaving smelters without the tools to manage molten metal safely.

These breaches share a theme: when business and control networks merge, a single phishing email or unpatched server can cascade into days-long shutdowns, financial ruin, and even risks to human safety.

**From chaos to control**

So how can organisations transform this high-stakes vulnerability into a manageable, continuously improving process? It starts with treating OT security not as a one-off "project" but as an evolving journey—one where visibility, benchmarking, and automated remediation become your frontline defence.

1. **Map the terrain.** Begin with a thorough inventory of every valve, sensor, and PLC (Programmable Logic Controller) connected to your network—plus every remote-access path that might sneak an attacker inside.
2. **Score your posture.** Use appropriate frameworks coupled with the latest NCSC guidance to assess your maturity. How do you compare with peers? Which domains—incident response, training, network segmentation—need the most urgent attention?
3. **Automate the cure.** Armed with a clear gap analysis, employ a unified platform to generate prioritised, time-bound action plans. Assign tasks, set deadlines, and monitor progress on a single dashboard—no more chasing email threads or updating spreadsheets in the dead of night.
4. **Close the loop.** With each vulnerability highlighted and managed, your maturity score nudges upward. Schedule regular "health checks" to catch new exposures—whether from policy changes, new regulations, or fresh threat-actor tactics—before they can be exploited.

**A future that flows**

The stakes could not be higher. In a hyper-connected world, a blackout or water-treatment glitch triggered by cyber-sabotage is no longer science fiction—it's a looming reality. But by embracing a continuous-improvement mindset, mapping and benchmarking your entire OT estate, and automating tailored fixes, organisations can turn vulnerability into advantage.

OpenPSM Cyber Resilience is a software solution which helps companies map systems against best practice guidance and highlight vulnerabilities, plan fixes and plot maturity in this ever-evolving environment.

***For more information, contact fhought@openpsm.uk***

# From Lab to Market: Patent Strategies for Industrial Biotechnology

The application of biological systems, from enzymes to full micro-organisms, in industrial processes, also known as "industrial biotechnology", is a rapidly growing field with utility in the chemistry sector. The use of such technologies can improve selectivity, yields and the ecological impact of chemical synthesis, for example by enabling transformations to take place at lower temperatures in green solvents.

The existing chemical and biotechnological expertise in the north-west has the potential to establish an important hub of innovation and manufacturing relating to industrial biotechnology. However, commercialisation of these technologies is crucial to continued development. Successful commercialisation often relies on robust intellectual property protection.

Identification of patentable intellectual property can be complex, especially when innovating at the boundary between biotechnology and chemistry. Of course, any potentially patentable innovations are subject to the usual requirements of novelty and inventiveness.

**Innovative biological systems**

Finding a biological system which can carry out a desired transformation effectively can be challenging. Recently, commercial libraries have become more widely available, providing a key tool for easy screening of desired reactivity and selectivity. Micro-organisms and enzymes can also be modified with techniques such as directed evolution and "new genomic techniques" (NGT) like CRISPR/Cas9 (awarded the 2018 and 2020 Nobel Prizes in Chemistry, respectively) to tailor activity towards specific transformations, improve stability, or improve tolerance to industrial conditions. Using these and other techniques, an innovative system might be developed from a known enzyme or micro-organism or a new enzyme/micro-organism developed from scratch.

Micro-organisms, such as bacteria, can be patented in many jurisdictions if the genome has been artificially modified, for example using NGT, or a novel plasmid ("extra" DNA molecule) inserted into the micro-organism. Such a patent may be based on the modified section of the genome or the presence of the specific plasmid.

New biological molecules such as enzymes resulting from directed evolution or NGT can also be protected by a patent. There are several ways to describe new biological molecules such as enzymes, for example by amino acid sequence or sequence modifications compared to the wild-type enzyme.

Therefore, a patent relating to industrial biotechnology may cover a modified micro-organism or cell itself, a new/modified enzyme, a plasmid DNA sequence, and the sequence of any modified DNA or protein.

The most common method of describing any nucleic acid or protein sequence is by "sequence identity". This can be based on a degree of similarity to a particular motif or a full sequence exemplified in the patent.

**Processes and uses**

What if a known, unmodified enzyme or micro-organism is utilised? Patents can also be granted for innovative processes (also known as methods) and new uses for known enzymes and micro-organisms.

Patents relating to processes typically cover a series of steps, for example:

*"A method of producing compound A comprising the steps of (i) mixing reagents B and C, and (ii) adding an enzyme D to the mixture of step (i)."*

Use claims, on the other hand, typically define the use more generally, for example:

*"The use of enzyme D in the synthesis of active compound A."*

While process claims are widely recognised, use claims are more dependent on jurisdiction. For example, the United States Patent and Trademark Office (USPTO) doesn't allow use claims. There are also additional requirements that need to be taken into account when filing in the USA, however, the USPTO is more lenient in other regards.

Process and use claims can be particularly useful when a known enzyme or micro-organism shows unexpected activity, or catalyses a key synthetic step previously only achievable using conventional chemical methods. However, these could also cover innovative reaction conditions or equipment set-ups.

**Products?**

If the product of any industrial process is the same as a known product, it can't be patented as it would lack novelty. However, if the product differs, for example in purity or stereoselectivity, and this wasn't achievable using known methods, the product might be considered novel. Again, this may depend on the jurisdiction in which you wish to obtain protection.

*Richard Maclennan*
*European Patent Attorney*

If you have an innovative biological system, process, use, or product that you think might be patentable, our experienced team of chemistry and biotechnology patent attorneys would be happy to help.

**Visit Home - Appleyard Lees or email ip@appleyardlees.com**

*Oliver Manners*
*Trainee Patent Attorney*

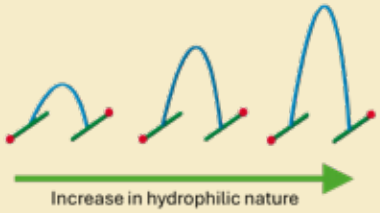
# Lankem expand their novel bio-based range of surfactant products

With over 25 years of experience in the industry, Lankem's strength comes from our market knowledge of surfactants and the innovation we have undertaken in this area. In line with our commitment to offering greener, more renewable products for various market sectors, we have expanded our unique BioLoop range.

**A rising tide of disruption**

Introduced in 2022, the original BioLoop surfactants feature two soybean-based hydrophobic segments connected by a molasses-derived hydrophilic loop. They have > 98% bio-based content, as confirmed by carbon-14 testing, and offer excellent surfactant properties making them ideal green alternatives to conventional, synthetic nonionics such as alcohol ethoxylates.

***Simplified structure of the BioLoop surfactants***




**New addition - BioLoop surfactants from Sunflower Oil**

Continuing work utilising our in-house technology we have now developed products based upon European-sourced, non-GMO sunflower oil with the same BioLoop structure. These variants offer slight performance difference compared to our original soybean variants. Further research is also being undertaken on other sustainable products, for example based on linseed.

***Current Lankem BioLoop Range***

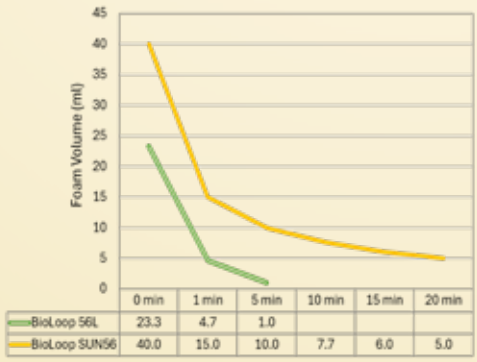
| Hydrophobic Section | Lankem Product | Activity (%) |
|---|---|---|
| Soybean | BioLoop 56L | 100 |
| | BioLoop 68L | 80 |
| | BioLoop 84L | 75 |
| Sunflower | BioLoop SUN56 | 100 |
| | BioLoop SUN68 | 80 |
| | BioLoop SUN84 | 75 |

**Comparison of foaming properties**

The foaming performance of a surfactant is important to understand the suitability of the product for a variety of applications. In some areas, such as personal care or cleaning, a medium or high level of foam is advantageous. However, when the product is desired for use in systems such as coatings formulations or emulsion stabilisation, a lower level of foaming may be required.

The graph to the top right illustrates the results of foam generation testing, measured using a simple cylinder shake experiment with 100mL of 0.1% w/w surfactant aqueous solution. The sunflower grade, BioLoop SUN56, shows a higher level of foam in comparison to the equivalent soybean variant, indicating potential for use in systems where this is a performance factor.

***Foam generation of BioLoop 56L and BioLoop SUN56***

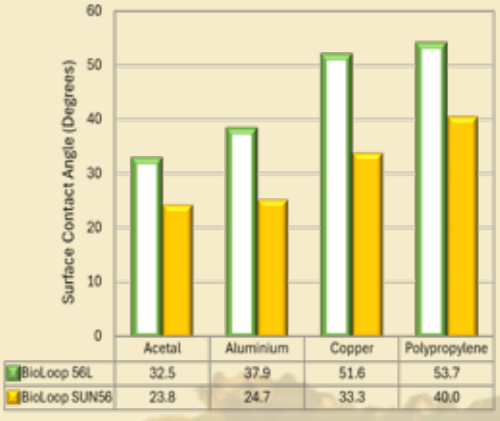



**Comparison of surface contact angles**

A key benefit of using a surfactant is to lower the surface tension of the solution in which they are dissolved, and this has the effect of reducing the contact angle of a droplet onto a surface. Contact angle measurements can be used to gauge the effectiveness of a surfactant for wetting a substrate or particle, and this has been tested for the Lankem BioLoop products at a concentration of 0.1% ww/w surfactant as shown in the graph below.

Across the range of substrates evaluated, the new sunflower-based variant displayed a superior wetting performance compared to the soybean-based BioLoop, although both products gave a significant reduction over the contact angle for water.

***Contact angles of BioLoop 56L and BioLoop SUN56***




**Conclusion and further research**

Lankem have expanded the range of BioLoop products to include those based upon sunflower oil in addition to the standard soybean-based surfactants. Performance differences were seen in foaming and contact angle, and more testing is ongoing for applications-focused areas such as coatings, personal care and agricultural systems.

***For more information, visit https://www.lankem.com/***

# Innovation

The necessity for innovation has never been more important and potentially more influential in determining our future. Not only is there a need for innovation, but there is a need for innovative products and processes to be suitably commercialised and adopted in a timely manner.

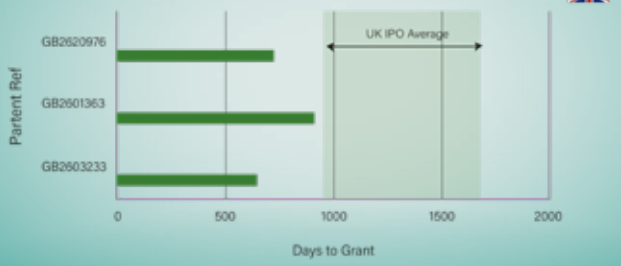
CHEMICAL PROCESSING SERVICES LTD [CPS] is a global market leader in the field of innovative polymer technology, and the company's success is based on pioneering the development of new technology to address technical requirements, regulatory and safety issues, as well as looking to address the anthropogenic damage to the planet. CPS Managing Director and inventor of these products Paul H Jones, believes in protecting the IP to allow clean licencing agreements. He works closely with Mathys & Squire Patent attorneys who have proven to be an essential partner in the intellectual property management strategy in line with the commercial aims of his business.

Paul is the applicant to a large (and growing) portfolio of patent applications in the green chemistry space, and this portfolio is noteworthy for the shear extent of the innovation over the existing technology in the field, which is evident in the rapid grant times that patent applications in the portfolio continue to enjoy. Since November 2020, Paul has filed 20 Patent applications for innovative products, and all are at different stages of progression.

The UK Intellectual Property Office (UK IPO) is often seen as one of the faster Patent Offices in terms of processing applications to grant. Typically, Applicants can expect a UK patent to grant within about 2.5 to 4.5 years from filing. Meanwhile, the European Patent Office (EPO) released data showing that the average time from filing to grant of an EP application was 38.4 months (about 3.2 years). [1]

Paul H Jones of Bitrez Ltd is currently the proprietor of four granted patents - one of which being granted by the EPO and three granted by the UK IPO. All four patents were granted in significantly less time than is typical, reflecting not only the high level of novelty and inventiveness of the subject matter, but also the strategic use of available mechanisms to expedite prosecution. The filing date to grant times are shown to the right.

Table 1. File to Grant timeline




The average time for the three GB patents to grant was **2.1 years**, considerably faster than the UK IPO average of 2.5 to 4.5 years. Similarly, the EPO patent was granted in **34 months**, also outperforming the EPO average of 38.4 months.

Table 2. EU File to Grant timeline


Paul is also the Applicant for two further European patent applications that have already been accepted for grant, although as of the time of writing, the formal grant procedures are currently ongoing.

The two European patent Applications accepted for grant are also on track for very rapid grants. The process of patent prosecution includes the 'examination' phase in which patent offices will search for relevant prior art, and then compare the patent application's novelty and inventiveness to the state of the art. For highly innovative inventions, this stage can proceed more swiftly, as patent examiners may encounter little or no relevant prior art to challenge the application.

The UK IPO supports accelerated examination through initiatives such as 'the Green Channel' which is a fast-track route available to applicants whose inventions offer environmental benefits. Applicants can request accelerated processing by demonstrating their invention has an environmental benefit and convincing the Patent Office of the invention's green accolades. Various other strategies exist for expediting grant of UK and EPO patent applications – if any of these may be if interest to you, please feel free to contact Mike Stott or Max Ziemann of Mathys & Squire LLP who are the Patent Attorneys working on these cases.

**Visit https://www.mathys-squire.com/ for further information or https://www.cps-consultancy.com/**

[1] https://www.epo.org/en/about-us/transparency-portal/general/annual-review-2023/goal-3?utm

CHEMICAL PROCESSING SERVICES LTD
innovative polymer design

Mathys&Squire

CAMIDA

Source · Supply · Solution

# Driving Innovation in BioTech

**Camida is a customer service-driven supplier of specialised chemical products to a range of industries. We aspire to meet the highest industry standards and conform to the most stringent international protocols.**

Camida is a trusted partner in the BioTech sector, providing high-quality speciality raw materials that support cutting-edge developments in gene therapy, monoclonal antibiodies, cell therapy and drug deliver systems. Our strategic partnerships with industry leaders enable us to deliver best in-class solutions to our customers.

Through these collaborations , Camida continues to uphold the highest standards in quality, regulatory compliance, and market expertise, ensuring our customers stay at the forefront of BioTech innovation.

## Our Process

### SOURCE

Sourcing/Procurement - With over 35 years experience in Global supply and over 400 suppliers in more than 25 countries, Camida are uniquely equipped to meet high quality raw material procurement needs.

### SUPPLY

Chemical Distribution - Camida are proud of their long term relationship with Global Leaders in Chemical Manufacturing.

### SOLUTION

Vendor Consolidation - Camida have many years experience in Vendor Refuction Programmes. These programmes include many additional customer benefits.

# Our Key BioTech Partners

BIOSPECTRA

BioSpectra is best in class U.S. manufacturer of cGMP Fine Chemicals for the BioTech Market. Operating out of FDA registered and inspected cGMP manufacturing facilities in Pennsylvania, USA, BioSpectra upholds the highest standards in quality, compliance and regulatory support.

**Product Spotlight - TRIS HCL**

BioSpectra is the largest producer of Tris HCL, with multiple equivalent production suites at different sites in Pennsylvania USA for enhanced supply-chain security.

CURAPATH

Curapath is a premier European manufacturer specialising in cGMP-grade lipid and polymer excipients tailored for the pharmaceutical and biotechnology sectors. With state-of-the- art facilities in Valencia, Spain, Curapath consistently upholds the highest standards of quality, regulatory compliance and customer support.

**Product Spotlight - LIPIDS**

Curapath produces PEG-free shielding lipids such as polysarcosine, polyglutamic acid and polyoxazoline based compounds for Lipid nanoparticle formulation. The use of these novel molecules avoids potential PEG side eff ects while producing an effective delivery of RNA.

## Contact a member of our Life Sciences Team today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# Yorkshire Manufacturer Recognised as One of the UK's Top Industry Leaders

Chris Hart, Managing Director of Bradford-based engineering firm Graham Hart Process Technology, has been named one of the UK's most inspiring manufacturing leaders in the prestigious Manufacturing 100 Awards 2025.

Organised annually by The Manufacturer magazine, the Manufacturing 100 celebrates individuals who are driving positive change, innovation, and excellence across UK industry. Chris's inclusion highlights not only his personal leadership, but also the remarkable achievements of his company in the high-integrity engineering sector.

Founded over 50 years ago, Graham Hart Process Technology specialises in the design and manufacture of bespoke, high-integrity heat exchangers and pressure-containing equipment. Its customers span critical industries including pharmaceuticals, energy recovery, chemical processing, and food and drink. The company is recognised for its commitment to engineering excellence, quality craftsmanship, and delivering technical solutions to complex challenges.

Under Chris's leadership, the company has continued to grow — embracing innovation while investing in people, skills, and digital transformation. Recent initiatives include increased digital integration, upgraded production capabilities, and the development of partnerships with universities, education providers, and the local community.


"I'm incredibly honoured to be included in this year's Manufacturing 100," said Chris Hart, Managing Director of Graham Hart Process Technology.

"This recognition reflects the dedication of our entire team, who work hard every day to deliver world-class engineering from our base here in Bradford. We may be a relatively small company, but we have big ambitions and take great pride in solving some of the toughest challenges for our clients across the UK and beyond."

The award follows a series of recent achievements by the company, including being the only heat exchanger manufacturer in the UK to hold all three industry accreditations: Fit for Nuclear (F4N), Fit for Hydrogen (F4H2) and Fit for Carbon Capture, Usage and Storage (F4CCUS). Graham Hart Process Technology are certified ISO45001, ISO14001, ISO9001 employers, carry the ASME U Stamp, and have also been recognised by the Good Business Charter. The company has achieved a 100% record of delivering on time and in full for all orders placed over the last nine years.

**For more information, visit: www.graham-hart.com**

# Leading environmental firms join Sci-Tech Daresbury

Leading science and innovation campus, Sci-Tech Daresbury, has strengthened its position as a hub for environmental sustainability with the arrival of Environmental Protection Group (EPG), an environmental engineering and design consultancy, and Bowland Ecology, a specialist ecological consultancy.

Both companies have relocated to the campus, bringing their expertise in sustainability, environmental innovation, and ecological services to this vibrant science and innovation ecosystem.

Founded in 1998, EPG is an established environmental engineering and design consultancy specialising in sustainable drainage systems (SuDS), geoenvironmental services, structural waterproofing, and environmental monitoring.

The company has been involved in high-profile projects including the Stockport Interchange Podium Park, London 2012 Olympic Park drainage infrastructure, and smart green roof systems in Manchester that autonomously regulate water discharge using weather data.

EPG contributes to British Standards for Sustainable Drainage Systems (SuDS) and contamination mitigation and provides expert witness testimony in court. The company was recently shortlisted for SME of the Year by New Civil Engineer.

Bowland Ecology, founded in 2005, specialises in ecological consultancy services including biodiversity net gain, ecological impact assessments, and habitat restoration.

The consultancy serves major clients including Scottish Power, United Utilities, Severn Trent Water, BAE Systems, and various Government agencies, local authorities and developers. Recently acquired by Origin Enterprises in 2024, Bowland is now connected to six other environmental businesses, enabling cross-sector collaboration.

At Sci-Tech Daresbury, Bowland Ecology has established a laboratory focused on aquatic ecology, entomology and advanced sampling methods. The company has been shortlisted for the CIEEM Medium-Sized Consultancy of the Year award.

Both companies cite Sci-Tech Daresbury's innovation-oriented environment, flexible space, and collaborative ecosystem as key factors in their decision to locate at the Liverpool City Region campus. In doing so, they join an ecosystem that provides companies the opportunities and environment needed to grow, attract, and retain talent.

**Phil Williams, Director at Environmental Protection Group, said:** "Our move to Sci-Tech Daresbury represents a significant step forward in our growth. The campus provides us with not only the larger and more professional workspace we required but also positions us within an innovation-focused environment that perfectly complements our high-profile clientele.

"We're particularly excited about the potential for expansion, and opportunities to collaborate with like-minded businesses as we continue to pioneer sustainable solutions across the UK and internationally."

**Jeremy James, Managing Director at Bowland Ecology, said:** "Sci-Tech Daresbury offers the ideal environment for establishing our centre of excellence for aquatic ecology services. The flexible lab space with room to expand, combined with access to advanced facilities and a community of innovative businesses, aligns perfectly with what we are looking for.

"Since our acquisition by Origin Enterprises, we've been pursuing cross-sector collaboration opportunities, and this campus provides the ecosystem to make that possible. We've already expanded our team since moving here and look forward to further growth and innovation in ecological consultancy."

**John Leake, Business Growth Director at Sci-Tech Daresbury, said:** "It's very exciting to welcome Environmental Protection Group and Bowland Ecology to our vibrant and growing campus community.

"These companies exemplify the innovative spirit we nurture at Sci-Tech Daresbury, and it is particularly pleasing to see them joining a growing cluster of companies on the campus working in sustainability and environmental technologies. Their combined expertise in environmental engineering and ecological consultancy strengthens our campus's commitment to supporting businesses that drive positive environmental impact while delivering commercial success."

**Further information is available at https://sci-techdaresbury.com/**

# Children Challenging Industry (CCI) Programme:

## Nurturing Future Scientists and Engineers in the North West

**The Children Challenging Industry (CCI) Programme,** a national initiative led by the **Centre of Industry Education Collaboration (CIEC) at University of York,** offers companies a unique opportunity to make a meaningful and lasting impact on children's STEM career aspirations and their science education; whilst promoting themselves as forward-thinking employers and champions of education. The programme has been running in the North West since September 2024, currently working with three local companies, with scope to introduce many more children to the chemical and allied industry, with your help.

**Why join the CCI programme?**

Becoming a CCI partner is a powerful way for you to deliver impactful, educational outreach. It offers the opportunity to enhance your corporate social responsibility profile; share your environmental achievements and goals with children; and excite them about becoming part of a future diverse workforce. Your STEM[1] professionals will take an active part in children's science education through site visits that allow children to interact with engineers and scientists and witness the relevance of their school science curriculum in a STEM working environment.

Your involvement will deepen relationships with schools and families in the region, positioning your company as a trusted partner who supports the education of tomorrow's scientists and engineers.

The CCI programme provides opportunities to increase employee engagement through bespoke training provided by CIEC. This training, aimed at developing the skills and confidence of company volunteers in preparation for children's site visits, provides everything needed for your scientists, engineers and technical staff to explain tricky science ideas to primary aged children. Support is also provided in the planning and delivery of activities during site visits, ensuring educational relevance, impact and engagement.

CENTRE *for* INDUSTRY EDUCATION COLLABORATION

***Dr Ruth Duberley - Advisory Teacher North West, Centre for Industry Education Collaboration***

**Real-World Science in Action**

One of our partners, Carbogen Amcis, has seen firsthand the positive impact of the programme and the value of collaborating with local primary schools:

*"The training was really fantastic, hands-on and practical. As a chemist, I know how complex science can be, but this gave me and my team the skills and confidence to break it down talk and demonstrate experimentally in a way that young children can truly enjoy and understand. We left feeling well-prepared and inspired to create our own interactive science activities and enthusiastic regarding the school visits. The feedback from the children has been amazing, very moving and made it all it worthwhile. It's been a brilliant way to give something back to the community and by helping young people see the excitement of science and what a career in STEM could offer them."*

***Elena Daia, Project Manager, Development Programs, Carbogen Amcis LTD***

By focusing the partnerships around the compelling stories of our sponsor companies, we create a powerful connection between classroom science and industry practice. In one example, yeast is used in the classroom to represent an active pharmaceutical ingredient produced by a company and used in cough medicine. Children investigate the best food source to grow the active ingredient, and experiment with the best method of removing the solid parts of the active ingredient from the liquid by using different filters. Using company storylines helps children grasp complex scientific processes in a relatable and age-appropriate way. This approach not only makes science more engaging, but also offers a tangible glimpse into careers in science and engineering; and highlights the relevance of scientific concepts in cutting-edge pharmaceutical development.

**Impact of the Programme**

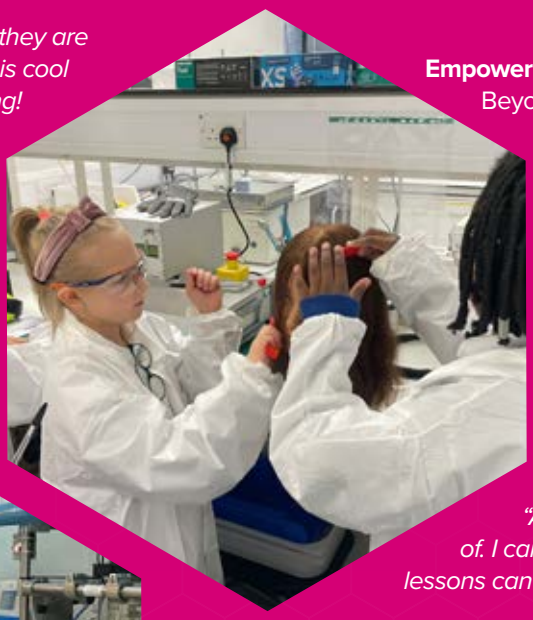
Since 1996, the CCI Programme has:

- Reached over **62,000 children**
- Supported **15,600 teachers**
- Enabled over **1,160 site visits**

During 2024-25, 9-11 year olds have been captivated by hands-on experiments linked to the work of partner companies; seeing how science shapes the world around them. Site visits have provided children with fantastic opportunities to see how STEM subjects drive real change in industry.

*"I love the different machinery and how they are used. The different jobs and equipment is cool and absolutely stunning. Overall amazing! I really consider and see myself becoming a physicist engineer or a scientist"*

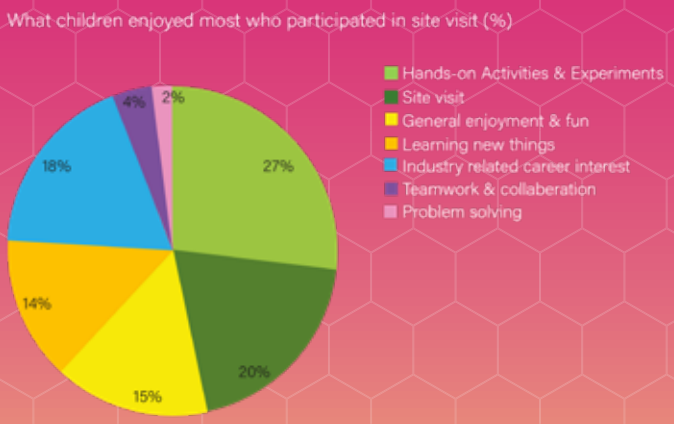
*"[I'd like to be] a chemist in science because I think I like the job a lot and it is very cool how you get to test and see things that would work to go into medicines and when it's ready you sell [them].*



Post-programme surveys showed that children gained a clearer, more positive view of industry and better understood how STEM subjects relate to their lives.

## National data collected in children's post CCI programme surveys[2]

### 1. What children enjoyed the most




### 2. Children gained a clearer, more positive view of industry and its everyday value.


**Empowering teachers and schools**

Beyond the classroom, the programme includes professional development for teachers. These CPD sessions have led to increased teacher confidence in delivering science lessons that link directly to STEM careers. They've also equipped educators to grow students' **Science Capital**[3] thus broadening aspirations and helping pupils see themselves as future scientists and engineers, as two teachers describe:

*"An awesome programme to be part of. I can now see how most of my science lessons can link to industry and careers."*

*"Very effective. This is a great way to expose children to real-world science and make links between the classroom and industry."*

**Be part of the North West's STEM future**

Your involvement will support training for company volunteers, site visits that connect pupils with real-world science, classroom experiences that bring your company's science to life, and professional development for teachers to raise all children's career aspirations and awareness of local STEM careers.

***If you would like to know more about the CCI programme and find out how to become an industry partner, please contact us at ciec@york.ac.uk***

*STEM[1] professionals ([1] Science, Technology, Engineering and Maths)*

# Interview with ReAgent's CEO, Rich Hudson

**1. ReAgent has an interesting history – can you tell us how it all started and how the company has evolved over the years?**

ReAgent was established in 1977 by my grandfather. He was working at ICI at the time and managed to convince them to outsource the manufacture of analytical and laboratory reagents. It was a smart move - ICI got better prices and a more responsive service, and he got to start a business.

My grandfather ran ReAgent for the first 10 years, then my father took over for the next 20. I stepped in in 2010, so this is my fifteenth year. I'm catching him up.

The company has changed enormously since the start. It's been nearly half a century, and the entire world has changed immeasurably. Honestly, it's hard to say what hasn't changed as almost everything has.

But there are two things that have remained constant: our culture and values - looking after people, doing the right thing, and always trying to be better.

**2. You've run ReAgent for 15 years. What were your goals when you first took the reins, and how have they changed over time?**

Growth has always been - and will always be - the number one priority. In the early days, it was about survival. Now, it's about making a positive impact on people's lives and on society.

As ReAgent grows, life improves for an ever-increasing number of people; not just our team, but their families, our customers, suppliers, contractors, the local community, and charities.

We're doing more than ever to give back. We have a volunteer programme, and we recently registered The ReAgent Foundation, which aims to support people and communities in need, whether that's helping those living with life-altering illnesses, funding hospices, or improving access to education, including STEM, as well as protecting and enhancing the natural environment and wildlife.

**3. What would you say are the biggest milestones ReAgent has achieved under your leadership?**

Winning the King's Award for International Trade this year is a huge feather in our cap. It was an immensely proud moment - and slightly surreal - being invited to Windsor Castle and talking to the King and Princess Anne about ReAgent's achievements.

Other milestones include achieving double-digit growth every year since I took over, and moving into a much larger factory, which we're now about to expand again. We have a 60,000-square-foot manufacturing facility, with the same amount again in outdoor storage. That also feels surreal, given where we started.

We also installed a huge solar farm across the entire roof last year, which was a great step forward.

**4. You've expanded significantly in the last few years, including internationally. What has driven that growth, and what challenges have come with it?**

Almost all of our growth is customer-driven. We focus relentlessly on what our customers need and how best to serve them. It's not a typical customer–supplier relationship; ReAgent is an integral part of our customers' supply chains. From a practical perspective, communication, organisation, and clear direction are key drivers of growth.

Of course, there have been challenges. COVID springs to mind. When it hit, half our customers stopped spending completely, while the other half ramped up dramatically. We had to be extremely flexible to manage that shift. Fortunately, flexibility is part of how we operate, so we were in a strong position to adapt.

**5. Winning the King's Award for Enterprise in International Trade is a huge accolade. What does it mean to you and the wider team?**

On a personal level, I'm delighted that ReAgent is now formally recognised as part of an elite group of outstanding companies. I feel like this is where we belong, and I have absolute conviction that many more accolades will follow.

But we won this award because of every individual at ReAgent. It's a fantastic recognition of the hard work and dedication of the whole team, and we're all immensely proud.

*Rich Hudson ReAgent CEO at the King's Award reception.*

**6. Culture seems to be a big part of the business. What kind of environment are you trying to create for your team?**

Culture is definitely a big part of ReAgent. We're a family business, and no matter how large we grow, we want to feel like one.

Put simply, I want everyone who works at ReAgent to be happy. We aim to be the best employer we can be. We offer a great workspace, extra holidays, private medical insurance, an Employee Assistance Programme, and regular company and team socials. We're also proud to be a Living Wage and Living Hours Employer.

**7. What are your top priorities for ReAgent over the next five years, both in the UK and globally?**

Not to repeat myself, but growth is and will always be the top priority. I expect more of the same in the UK, and I fully expect us to open a number of overseas factories within the next five years. Watch this space, it's going to happen!

Another important priority for me is to see The ReAgent Foundation have an ever-increasing impact.

**8. Looking back, what are you most proud of from your time at ReAgent – and what still excites you about the future?**

I'm proud that the tiny company my grandfather founded - barely more than a laboratory at the start - is now becoming an international manufacturing force. We're an awesome company, with awesome people working here, and yet I still feel like we're only just getting started.

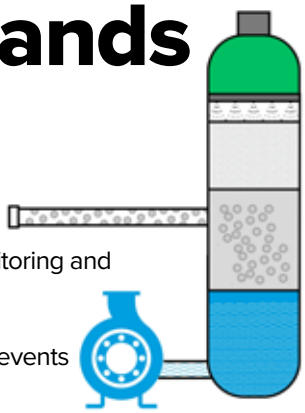
**For further details about ReAgent please visit https://www.reagent.co.uk/**





***ReAgent volunteer day gardening at Halton Haven Hospice.***

# Air quality compliance demands effective fume scrubbers



This statement rings particularly true as the UK strives to meet its 2030 air quality targets. Industrial ventilation systems are crucial for workplace safety and environmental compliance in manufacturing facilities. With the UK's Clean Air Strategy targeting a 46% reduction in PM2.5 emissions by 2030, industries such as chemical processing, pharmaceutical manufacturing, and metalworking must maintain sophisticated ventilation systems to remove harmful fumes, particulates, and volatile compounds.

Fume scrubbers are the cornerstone of these systems, preventing harmful contaminants from reaching our atmosphere with chemical driving scrubber efficiency. Without efficient pumps, even the most advanced fume scrubbers would struggle to meet increasingly stringent air quality standards. Choosing the right pumps optimises energy consumption, minimises maintenance requirements, and maximises system longevity.

### The Role of Chemical Pumps in Fume Scrubber Systems

Modern scrubber systems predominantly employ centrifugal pumps due to their consistent flow characteristics and superior corrosion resistance. These pumps operate in a continuous cycle, circulating scrubbing liquid that, after passing through the scrubber, returns to the collection tank for subsequent cycles. The scrubbing liquid gradually accumulates pollutants throughout this process.

### Choosing a Pump to Meet Scrubber Needs

The selection of an appropriate pump significantly influences fume scrubber performance. Contemporary air quality regulations present specific challenges that require careful consideration:

- **Material compatibility** - Choose materials that resist the chemicals in the scrubbing medium and contaminants that may gather.
- **Flow rate and head** - Determine exact figures based on how the scrubber is built and operates.
- **The location of the installation, system layouts, mounting options, and ambient temperatures** - Look at environmental conditions to understand their effect on pump efficiency and lifespan.
- **Pump sealing system – Is a mechanically sealed pump or a magnetic drive pump the optimal choice?** Decide based on containment needs and how often maintenance is required.
- **If mechanical seals are required, should they be single or double configuration?** - Factor in safety standards and specific working conditions.

### Maintenance and Efficiency

Implementing comprehensive monitoring and maintenance protocols is essential for optimal pump operation. A well-structured maintenance strategy prevents unexpected failures whilst reducing operational expenses. To achieve the UK's ambitious air quality targets, we recommend:

- **Conduct weekly inspections**, to keep up with a good preventive maintenance plan. Look for cracks or rust. Make sure to watch the temperature on pump parts, check seals to spot leaks or breakdowns, and pay attention to odd sounds or vibrations that might hint at problems. Simple visual checks can catch issues before they turn into big breakdowns.
- **Implement Variable Frequency Drives** to enhance pump efficiency. These systems change the frequency sent to the motor, allowing pumps to run at speeds tailored to exact demand levels. By adjusting rotation speed, pumps use less energy and face less mechanical strain. This extends their lifespan and lowers maintenance expenses.
- **Monitor pump performance** metrics, including suction pressure, discharge pressure, flow rate, pump speed, and energy consumption, to evaluate pump condition. Collecting this data helps understand the pump's condition and efficiency.
- **Assessing flow during shut-off** helps detect internal recirculation problems that can hurt system efficiency. Optimal performance is achieved when operating within 10 to 15 per cent of the Best Efficiency Point
- **Educating your team** plays a key role in keeping the system running. Skilled maintenance workers and operators act as the first shield against system breakdowns.

The fume scrubber systems that will help us meet Air Quality targets are being designed now. And selecting the appropriate pump is crucial for system effectiveness. Proper pump selection requires thorough analysis; materials must be compatible with the solution and additives. Flow rate and head pressure must align with system requirements, alongside careful installation planning and appropriate sealing system selection. Dedicating time to evaluate these factors ensures superior performance and minimises issues throughout the pump's operational life, contributing to the UK's journey toward meeting its air quality objectives.

***For further details visit***
***https://www.cdrpumps.co.uk/***

CDR Pumps UK Ltd | Making the right choice...

# The Future of Flow: Why Continuous Processing Is No Longer Optional

Continuous processing is rapidly emerging as a critical technology in the fine chemicals and pharmaceutical industries. With growing pressure to enhance cost-efficiency, safety, and sustainability, continuous flow is no longer a choice, it's a necessity. AM Technology recognises that the key to successful implementation lies in seamless scalability, from laboratory development through to full-scale commercial production. This capability enables manufacturers to accelerate innovation while maintaining consistent performance and reliability.

**Meeting the Demands of Modern Manufacturing**

While batch processing continues to play a role, its limitations are increasingly evident. Challenges such as variability and inefficiency hinder progress. Continuous processing offers transformative advantages: improved reaction control, superior heat and mass transfer, enhanced safety, and reduced solvent and energy consumption. These benefits lead to more consistent product quality and a reduced environmental footprint.

However, the biggest barrier for many organisations is bridging the knowledge gap between laboratory research and industrial-scale manufacturing. Uncertainty during scale-up often delays or derails implementation, slowing down time-to-market and innovation cycles.

**Designed for Scale: From Lab Reactors to Production Systems**

Scalability is built into every AM Technology system. The Coflore range of modular flow reactors supports a smooth transition from lab to production, covering lab-scale development with the Coflore ACR, pilot-scale with the Coflore ATR, and large-scale manufacturing with the Coflore RTR. Each system maintains consistent hydrodynamics and reaction environments, enabling reliable scale-up without the need to re-optimise processes at each stage.

This approach ensures that chemistries developed at small scale translate directly to commercial output. Supported by AM Technology's in-house development services, feasibility testing, and computational modelling, this approach significantly shortens development timelines while reducing risk.

**Proven Scale-Up in Practice**

AM Technology's continuous flow systems have been successfully applied in pharmaceutical manufacturing to enable rapid process development and scale-up. Their modular platform supports seamless transitions from laboratory-scale synthesis to pilot and commercial production, maintaining consistent performance, safety, and efficiency throughout.

This approach helps manufacturers achieve shorter development cycles, reduce operational costs, and improve sustainability by lowering solvent use, energy consumption, and waste generation.

**Supporting Sustainability and Safety**

Continuous flow systems operate with smaller volumes and closed environments, which inherently reduce risk. AM Technology's platforms incorporate integrated safety controls and feature compact footprints, further enhancing operational safety while supporting space efficiency and compliance with regulatory standards.

From an environmental perspective, continuous flow technology enables significant reductions in solvent use, energy demand, and waste generation. These improvements directly support net zero initiatives and sustainability goals throughout the chemical value chain.

**A Scalable Future**

The future of chemical manufacturing is not only continuous but also scalable. AM Technology offers the tools, expertise, and support necessary to help manufacturers achieve this future. Whether developing new syntheses or scaling production, their platforms provide the performance, reliability, and confidence essential for modern chemical processing.

***For more information on AM Technology's scalable continuous processing solutions, visit amt.uk.***

*Laboratory Reactor*
***Coflore ATR***

*Laboratory Reactor*
***Coflore ACR***

# Amazing chemical reaction erupts outside Catalyst!

Working in partnership with an artist to create optical illusion pavement art outside of Catalyst Science Discovery Centre and Museum, has been an ambition of Catalyst's for years. Giving free access to the local community to engage in a joyful, thought provoking, unique experience, to increase science capital and develop scientific knowledge.

This ambition, has been realised this year, thanks to funding from Dr Barrie Pennington and The Granada Foundation. Dr Pennington saw potential in the idea and introduced Catalyst to UrbanCanvas (Philip Battle and Catherine McMahon) UrbanCanvas – OutdoorArtsUK Northwest based pavement artists.

The artwork was formally opened on Friday 11th July by Mayor of Halton Councillor Martha Lloyd Jones and Consort Cllr Peter Lloyd Jones who were joined by Derek Twigg MP for Widnes and Halewood, and funders Dr Barrie Pennington and representatives from The Granada Foundation.

The fabulous illustration is truly representative of Catalyst, it depicts a large and well-known chemical reaction, the elephant's toothpaste experiment. Catalyst is excited to bring this to the community of West Bank and Halton, and as far as they know there hasn't been an anamorphic chemical reaction ever created before.

Lucinda Lewis, Education Manager at Catalyst said "At present the majority of the engagement opportunities at Catalyst take place within our building. We are a charity with no government or council funding so visitors have to pay admission to enter. We are working towards increasing our social value and community impact by delivering events outside, and plan to partner with other local groups to increase our outside offering. We recognise this to be important for a number of reasons- Catalyst aims to inform, educate and inspire all audiences in STEAM not just those who can afford to pay to come in. We want to build our reputation as a place for everybody, particularly our local community in West Bank. Everyone should feel welcome, included and confident to engage with us."

Irene Langford from the Granada Foundation said "The Granada Foundation is delighted to have been able to award a grant to support Catalyst's anamorphic art project. It is an inspiring, clever and fun experience for all ages and a great addition to Catalyst's mission to encourage young people's interest in chemistry."

Much thought went into what this artwork would entail. The artwork;

- is unique to Catalyst, it represents our heritage and reflects the lived experience of people in our area (who's ancestors most likely worked in the Catalyst building when it was Gossages Soap Factory or the chemical industry)
- achieves Catalyst's aims to educate and inform
- creates a joyful experience.

This opportunity won't be restricted to Catalyst's opening hours either, visitors can engage with this piece during the evening or on days when Catalyst is closed. However, when open, Catalyst will be offering out props to enhance the fun, lab coats, safety goggles.

It is important that this is an opportunity to learn in addition to being a joyful experience. There should be lots to accidently learn just through participating.

**For further information about Catalyst visit www.catalyst.org.uk**

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# Chemicals Northwest 2026 awards

19th March 2026

*We're back at the wonderful...*

## Titanic Hotel Liverpool


2025 Winners

# Join and connect

**Chemicals Northwest is the industry-led, chemical cluster support organisation for the North West and surrounding areas chemical sector, the largest in the UK. We are a funded by our members and owned and supported by the Chemical Industries Association.**

**Why not join Chemicals Northwest and connect to this diverse and dynamic industry?**

Chemicals northwest

www.cia.org.uk/chemicalsnorthwest

## spotlight *on new members*

## Ambipar

Ambipar is a global leader in environmental management and emergency response, delivering innovative solutions for industrial incidents, environmental disasters, and risk mitigation. With operations in 41 countries across six continents, Ambipar offers a wide range of services, including chemical spill response, waste management, environmental consulting, risk mitigation, and regulatory compliance support.

Within the chemical sector, Ambipar plays a vital role in supporting safe, compliant, and sustainable operations. Our specialised teams provide rapid response to chemical incidents, minimising environmental impact and protecting the wellbeing of workers and nearby communities. Through tailored health and safety consulting, we help clients meet complex regulatory requirements while reducing operational risks.

Ambipar's commitment to education and prevention is reflected in our comprehensive training programmes, which equip chemical industry professionals with the knowledge and skills needed for emergency preparedness, environmental responsibility, and safe handling of hazardous materials.

We also support the industry through environmental impact assessments, incident investigation and management, crisis communication planning, and technical support for chemical storage and transportation. Our waste minimisation strategies and investment in R&D ensure our clients have access to cutting-edge solutions that align with sustainability goals.

As a trusted partner to chemical companies worldwide, Ambipar collaborates closely with regulatory bodies to promote best practices and contribute to the development of industry standards. By combining global reach with local expertise, we deliver effective, context-specific solutions that protect ecosystems and ensure business continuity.

Ambipar is proud to join the Chemical Northwest community and looks forward to contributing to the advancement of environmental stewardship and safety across the sector.

ambipar

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# spotlight *on new members*

## Bitrez

Bitrez is a resin manufacturer, offering an extensive range of highly innovative materials developed for a broad range of markets. We work with a high standard of customer service and flexibility with controlled design, development, and implementation programmes to give our customers the right solutions for their resin requirements. Founded in 1982, we have developed a reputation for providing quality products with exceptional service. We recognise that all requirements are unique, and our team works hard to ensure that an outstanding package is provided.

We endeavour for constant improvement, achieving this through training, integration and investing in our technology and staff. We offer a wide number of resinous product types that serve a range of different functions. Our product portfolio is categorised under the established product brand names, with many now established as the more favoured industrial product types utilised in many areas. They are recognised for their innovative nature, quality and are all consistently high performance.

In addition to our award-winning product portfolio, we offer bespoke product design and contract manufacturing services. We make our plant and services available to organisations with materials available at Laboratory scale, through our Pilot facilities or through an array of different commercial batch sizes that stem from 3000 – 12000 Litres. We operate facilities managed under ISO 9001, 18001 & 45001 and strict non-disclosure agreements protecting customer proprietary information.

By combining our expertise with a customer-focused approach, we continue to be a reliable partner for specialist polymer solutions.

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## Chemical Processing Services Ltd

Chemical Processing Services Ltd [CPS] is a niche specialist polymer technology design and development product, and service provider. CPS focus on the supply of products, or we license innovative technology to produce regulatory compliant polymers. These materials are derived from sustainable feedstocks and/or absent from substances classified as carcinogenic, mutagenic, or toxic for reproduction (CMR substances).

IChemE Global Award, Business Start-Up of the Year in 2021 and subsequently awarded the inaugural King's Award for Enterprise in the Innovation category in 2023, CPS has amassed an enviable reputation for innovation and problem solving. With Patented new technology including Furalkamines, Mannamide, Permacure Poly-Mannich bases, Benzoxazines, and more...these new types of chemistry are pioneering the way for improved handling, performance, and safety standards.

With improved chemical analysis and material understanding, classifications change, regulations evolve, and they become increasingly more stringent. We horizon scan and provide solutions for our customers to enable them to maintain compliance, differentiate from competition, and provide safer solutions to their customer base.

By combining our expertise with a customer-focused approach, we continue to be a reliable partner for specialist polymer solutions.

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# GPEC Group

## Global Piping and Engineering Consultants

**GPEC Group** is made up of four business divisions, each supporting our commitment to delivering engineered solutions to the process industries:

**GPEC Ltd.** – Established in 2008, the legacy representative business of the Group. Acting as the UK partner for world-class OEMs, we provide engineered valves, HIPPS, heat exchangers, expansion joints, and other fabricated equipment for niche applications.

**GPEC Supply Ltd.** – Registered in 2019, the Group's dynamic trading division. Operating as the UK distributor for several Principal Partners, GPEC Supply manages the supply of equipment packages, project execution, TAR support, and obsolescence solutions.

**GPEC Service** – A specialist service arm within GPEC Supply, offering on-site support, servicing, and repairs, utilising our partners' expertise and technologies.

**GPEC International Ltd.** – Currently operating in Guyana with a locally established division, with potential for further international expansion.

**Our Value Proposition**

- **For Customers** – we provide access to advanced engineered equipment, support project delivery, solve complex technical challenges, and deliver efficiency gains through the application of innovative technologies.
- **For Manufacturers** – we act as trusted representatives, opening markets, developing new business opportunities, and providing long-term growth through customer access and technical expertise.

**GPEC Supply – Delivering Projects and Solutions**

Through GPEC Supply, we support end users, EPCs, and OEMs with:

- **Project and TAR Support** – delivering solutions from planning to execution.
- **Package Supply** – managing multi-OEM equipment packages from 25–500+ line items.
- **Obsolescence Management** – sourcing modern solutions to replace outdated equipment and ensuring continuity of supply.

As proud new members of **Chemicals Northwest**, GPEC looks forward to contributing our expertise to the region's chemical sector, strengthening collaboration, and supporting innovation within the UK's largest chemical cluster.

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# Rhenus Road Freight UK

Rhenus operates across five key divisions: Road Freight (Overland Transport), Air & Ocean, Contract Logistics, Port Logistics, and Automotive. Each division brings specialised expertise, allowing us to offer integrated logistics solutions across a wide range of industries.

Founded in 1912, Rhenus is a global logistics provider with over 41,000 employees, operating across 1,330+ sites in more than 70 countries. Rhenus Road Freight UK is part of the Rhenus Group's Overland Transport division and provides national and international road freight solutions, including services tailored to the chemical industry.

Our UK operations include sites in Corby, Cannock and Bradford, forming the backbone of a dedicated domestic network launched in early 2025. This runs alongside our well-established European routes, offering coverage for hazardous, bulky and time-critical freight.

Rhenus has longstanding experience in handling chemical products. All operations are supported by quality and safety certifications including SQAS, ISO 9001 and ISO 14001. We operate with in-house chemical logistics expertise and processes to manage ADR compliance, customs requirements, and security documentation.

Digital tools such as real-time tracking and customer portals support shipment visibility and operational efficiency.

Rhenus also offers warehousing, customs clearance, and multimodal options via its Air & Ocean division.

**We look forward to being part of the Chemicals Northwest network.**

**Contact:**

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**T:** 07769 332660
**W:** www.rhenus.group

**UK Locations:**
Manchester | Corby | Cannock | Bradford | Maldon | Hinckley | Newton Aycliffe | Bristol

# Rhenus Logistics

Rhenus Road Freight UK is proud to join Chemicals Northwest, bringing many years of expertise and a solid record in handling chemical transport. Part of the worldwide Rhenus Group, with more than 1,330 sites around the globe, we provide reliable, flexible road services that match the unique demands of the chemical sector.

The chemicals industry is a cornerstone of global commerce, and a sector in which Rhenus has long established dedicated expertise. Chemical logistics demand precision, compliance and deep industry knowledge, especially when it comes to the timely transportation of hazardous and temperature-sensitive materials.

As specialist handlers of chemical products, Rhenus meets these challenges head-on, adhering to the highest quality and safety standards, including SQAS, ISO 9001 and 14001. We have rigorous systems in place to handle security, customs and documentation, ensuring continued compliance across the entire process.

In early 2025 we rolled out a UK-only road service, with hubs in Corby, Bradford and Cannock. This new network works alongside our long-established international routes, providing nationwide reach for dangerous loads, bulky freight and urgent deliveries.

At Rhenus, safety, visibility and friendly support come first. Digital tools such as track-and-trace, customer portals and real-time alerts keep you informed, while our experienced team, ensures every shipment is handled with care.

Our capabilities don't end with road. Rhenus Air and Ocean moves cargo worldwide by plane or vessel, delivering fast, secure options tailor-made for sensitive chemicals.

Joining Chemical Northwest is an exciting move for us as a business. We're looking forward to collaborating with members, forging new connections and sharing best practice to help drive the industry forward and support business growth.


Ask the experts – we're here to help! - uk.commercialsupport@rhenus.com

# Supplying to the Chemical Industry

**Knowing your local supply chains is important, and suppliers of expertise, solutions and great products are right here in the northwest. CNW members have a strong association with and many years of experience supplying to the chemical industry. The companies listed in this directory cover a wide range of products and services. They have established customers in the sector, with proven track records. Many will be well known, long-standing firms and there will also be new and innovative businesses that you may not have heard about. Effective supply partnerships, delivering success for all! For more details, the websites for the listed companies and organisations can be found at:**
**https://www.cia.org.uk/chemicalsnorthwest/Membership/Our-Members/**

## Chemicals Distribution, logistics & chemical handling

### 2M Holdings Ltd
Chemical distribution and related services of sample management, storage and blending. Provision of AdBlue, Samsol products, packed chlorine and TRIKLONE & PERKLONE chlorinated solvents. Markets served include: automotive, precision cleaning, coating, oilfield & refineries, flavours, fragrances, surfactants for personal care, household and industrial cleaning and pharmaceuticals.

### Actikem Ltd
An ISO9001 certified business, specialising in a range of chemical processes and manufacturing services, including mixing, storage and re-packaging. We provide toll and custom manufacturing services for SMEs as well as blue-chip organisations, and supply customers with on-tap production facilities, offering them potential cost-savings and greater flexibility.

### Camida
Established in 1988, is a customer-focused supplier of specialised chemical products. We provide global sourcing solutions across industries, meeting strict international standards. Our expert sourcing team handles over 3,000 annual enquiries, ensuring seamless procurement. Camida simplifies your supply chain, acting as your trusted partner in sourcing and supply.

### F2 Chemicals Ltd
As a specialist in the handling of fluorine gas, F2 Chemicals Ltd offers a variety of organofluorine products all manufactured at our Preston plant. Our primary product is a range of high specification perfluorocarbons, such as octafluoropropane and perfluorodecalin, under the Flutec tradename, used in applications including medical, tracers, plasma-cleaning, cooling and cosmetics.

### Hibiscus
Hibiscus is one of the UK's leading manufacturers of chemical labels and hazard communication compliance software. For over 40 years they have specialised in providing high-quality labelling solutions for the chemical and hazardous goods industries and are renowned for their knowledge of industry legislation and for the durability and excellent performance of their products.

### Hosokawa Micron Ltd
Integrated powder processing technologies including: size reduction, air classification, mixing, drying, containment equipment such as gloveboxes and downflow booths. Contract processing services for 1kg to multi-tonne lots. Remote monitoring solutions that include: condition monitoring, analytics for improving product quality and energy efficiency and on-line diagnostics for predictive maintenance and improved plant availability.

### Indaver Solvents Ltd
Part of the international environmental group Indaver. Indaver Solvents offers comprehensive in-house and end-to-end solutions for industrial (non) hazardous solvent waste and recycling requirements. They support with lab analysis, pilot scale trials, and recycling at commercial scale. With their Cheshire-based solvent recovery installations, combined with bespoke fine chemicals manufacturing, they provide continuous, sustainable and high-quality recovery solutions to the Chemical and Pharmaceutical industry . Find out more here - Solvent recycling - Indaver

### Keyser & Mackay
Keyser & Mackay is a market oriented agent and distributor of chemical raw materials and industrial equipment, acting as an intermediary between customers and suppliers. Keyser and Mackay NV has their headquarters in Amsterdam, Holland and has been active since 1894. With over 125 years' experience, the company's success today is down to reaping the benefits of all those generations of staff that have been or still are working for it. Today, the group has offices in the Netherlands, Belgium, France, Switzerland, Germany, Poland and Spain, and has started another chapter with the recent entry into the UK market.

### Klüber
Global manufacturer of over 2500 specialty lubricants for virtually every industry, Klüber Lubrication high-performance speciality lubricants and effective lubrication management programs enable customers to achieve their operational efficiency goals, increase reliability, and lower the total cost of ownership across assets.

### The Rhenus Group
**One of the leading logistics specialists with** global business operations and annual turnover amounting to EUR 8.2 billion. 41,000 employees work at 1,330 business sites in more than 70+ countries and develop innovative solutions along the complete supply chain. Whether providing transport, warehousing, customs clearance or value-added services, the family-owned business pools its operations in various business units where the needs of customers are always the major focus.

### Scott Pallets
An established timber pallet and packaging solutions business that delivers a wide range of goods and services to industrial, and manufacturing markets across the UK. We supply new manufactured pallets and packaging, reconditioned pallets and recover pallets across our strategic UK site network.

## Education, training & skills

### Catalyst Science Discovery Centre
An independent charitable trust playing a pivotal role in promoting science across the Northwest. Catalyst works in conjunction with industry partners to excite young people about all STEM subjects and careers available within the science sector. Companies can also sponsor a local school to visit and attend industry days.

### Centre for Industry Education Collaboration
CIEC supports companies in making credible and sustainable links with primary schools, in order to inspire the next generation of scientists and engineers. We train STEM professionals to improve their communication skills, and develop industry-focused activities for use directly by teachers or by ambassadors visiting schools.

### Chemistry with Cabbage
We work with students of all ages, demonstrating through practical experiments, the relevance of chemistry in solving problems. Research shows that children make career choices very early on, so capturing their imagination early is important. Chemical companies are welcome to support our hands-on work in primary schools.

### IChemE
The leading professional qualifying body for chemical, biochemical and process engineers.

## Engineering products & services

### AM Technology
AM Technology are experts in continuous manufacturing solutions for the chemical and pharmaceutical industries with their patented Coflore flow reactor technology suitable for a wide range of chemical processes, including multiphasic reactions with slurries, from grams to kilotons.

### Beamex
Beamex helps its customers to find a better way to calibrate, according to the most demanding requirements of process instrumentation. Beamex offers a comprehensive range of products and services – from portable calibrators to workstations, calibration accessories, calibration software, industry-specific solutions and professional services.

### CDR Pumps UK
A leading independent Pump manufacturer. Since opening our doors 60 years ago, we have gone from strength to strength bringing you a company that has the product, service and knowledge to support the chemical, nuclear and pharmaceutical industries on a global scale. And small enough to give you the individual care and attention you need yet big enough to support multi-site,multi-national blue-chip chemical companies. Our global manufacturing facility in Milan is strategically located to support our customers across the world.

### CRP
A leading provider of Fluoropolymer PTFE/PFA lined piping and associated equipment. Suppling everything necessary to construct fully integrated piping systems, whilst also offering ongoing support and education from there experts. Their products withstand the most challenging environments, ensuring safety and reliability in even the most demanding applications.

### Dron & Dickson
Dron & Dickson are recognised market leaders in the supply and maintenance of hazardous area electrical equipment. Our Engineering Services and Wholesale divisions offer bespoke solutions incorporating the very latest industry standard and safety legislation.

*continued overleaf*

# Know your supply chains

## Engineering products & services

### GPEC Group
Global Piping and Engineering Consultants. Made up of 4 business division including GPEC Ltd and GPEC Supply.
GPEC Ltd is the UK representative for manufacturers of valves, heat exchangers, expansion joints & other fabricated equipment for engineered and niche applications.
GPEC Supply is a supplier of valves and engineered equipment for MRO and Project specific requirements.

### Laker Vent Engineering Ltd
Supply, fabrication and installation of process and utility piping systems. Project management, detailing, procurement, on and off-site fabrication and installation of pipework and coded welding. Associated steelwork supporting and mechanical installation of plant and equipment. Testing and Handover. Pipework and steelwork is fabricated to specific customer-needs and conforms to all appropriate ISO, BS EN and ASME standards and specifications.

### Langfields
Langfields are specialist fabricators of process plant equipment for the Hydrogen, Waste to Energy, Pharmaceutical, Petrochemical, Chemical, Nuclear and other process industries.

### Lokring UK
Lokring UK offer technical engineering support and sales for Lokring technology across the UK. The Lokring “Cold Weld” pipe and tube joint reduces the need for hot work, NDT inspection and reduces on site resources. Code compliant with ASME B31. Lokring is a Safer, Faster, Lower Cost replacement for site welding and flanged fabrication.

### Manntek AB
Supply of safety dry disconnect and safety breakaway couplings. Comprehensive range of specialist dry quick release couplings to suit 99% of known chemical applications. Bespoke solutions with a size range of ¾” to 8” nb. Dry disconnect couplings are made to NATO standard Stanag 3756.

### METTLER TOLEDO
Mettler Toledo manufacture & service weighing, analytical and inspection equipment used throughout the product cycle from Research & Development, through Scale-Up & Production to Quality Control, Storage & Despatch. We work with our customers to understand and achieve their business goals, including key areas of safety, quality, productivity and sustainability.

### O’Hare Engineering Design Ltd
Innovative, Detailed, Working Solutions.
O’Hare Engineering Design Ltd. are providers of 3D laser scanning, mechanical and pipe design solutions. With over 18 years’ experience, we know that accuracy is fundamentally the most important element in every engineering design project, so our client focused approach uses the latest technology to provide an effective solution that is sure to hit the brief, every time.

### Perry Process Equipment Ltd
Buying and selling of high quality used processing plant and equipment. Savings of up to 70% on the cost of process equipment, full mechanical and electrical refurbishment and equipment immediately available form stock. Centrifuges, dryers, evaporators, filters, heat exchangers, mills, mixers, reactors, separators, tanks.

### ProDecon®
Providing industrial service solutions to the Oil&Gas, Chemical, Power, Pharmaceutical and Industrial sectors. Specialising in hazardous hydrocarbon and chemical environments. ProDecon® has a unique range of technical expertise, that enables us to support customers with restoring process performance and providing maintenance risk management through bespoke industrial cleaning solutions.

### Studley Engineering Ltd
A multi-disciplined mechanical and electrical engineering contractor, providing a comprehensive service to the process industries in disciplines including: steelwork, welding, maintenance, site services, pipework, tanks and vessels. Over time we have gained an enviable reputation as a reliable, responsive, motivated contractor that delivers safe, high quality, cost effective work.

### Valvworx Ltd
Valve breakdowns are commonplace, and high on the list of painful problems for Chemical Plant Operators. At Valvworx Ltd, we can support you with valve maintenance & repair solutions, and offer advice, specification and supply of new valves, ensuring suitability for the process they are intended for, and lasting longer in service.

### Yokogawa
Yokogawa is a leading provider of field instrumentation, safety systems, industrial automation and digital transformation solutions. IIOT, OT Cybersecurity and Alarm Management are specific areas of focus for Yokogawa’s Advanced Solutions team with a number of major projects currently being delivered across Europe.

## Engineering project management & energy

### Arthian
Combining three decades of high-hazard industry expertise with technical excellence to support every project phase, from feasibility and planning to design and construction. Our planning, environmental, engineering, and safety consultants deliver insights and innovative, sustainable solutions, empowering clients to make strategic, long-term decisions.

### Atlas Copco Rental UK
Provides temporary cost and energy efficient solutions for long- or short-term demands, planned maintenance or unexpected emergencies. Our engineers design the most suitable temporary installation, utilising our fleet of state-of-the-art equipment which includes 100% oil-free Class 0 and oil-injected compressed air at medium or high pressure, generators for power, and nitrogen. Quality of service, environmental care and personnel safety are guaranteed by our triple ISO certification.

### AXIOM
A multi-award-winning, asset management solutions provider, supporting the chemical, pharmaceutical, oil & gas, bulk storage, power, renewables and related industries. With integration of their Materials, Mechanical, Inspection, Process Engineering and Process Safety Services, Axiom are uniquely positioned to identify and mitigate key through-life risks across the entire asset life cycle.

### Graham Hart (Process Technology) Ltd
Graham Hart Process Technology Ltd is a global leader in the design and manufacture of high integrity heat transfer and specialist pressure equipment. Their knowledge, reputation and expertise makes them the first choice for many companies desiring guaranteed mechanical and process design solutions, for their individual heat exchanger and pressure vessel needs.Providing innovative, bespoke solutions to a variety of sectors for over 50 years, they have a skilled, agile and talented team that has achieved a 100% On Time In Full delivery record for their clients since 2016.

### Geosyntec
a consulting and engineering firm serving the chemicals, pharmaceuticals and wider manufacturing sectors addressing new ventures and complex problems involving land contamination, transactions, permitting and compliance, and civil infrastructure. We operate from over 130 offices located in the UK & Ireland, North America, Sweden, Spain, Middle East, and Australia.

### John F Hunt Regeneration Ltd
John F Hunt Regeneration are a trusted partner for brownfield demolition, remediation, water treatment and enabling services. As part of the John F Hunt Group, we have the scale and financial stability to provide a complete works package no matter the size of the scheme.

### PM Group
PM Group is an employee owned, international project delivery company operating across Europe, the USA and Asia. We have a 50+ year track record in project management, process design, process safety, facility design and construction management for leading multinational companies.

### px Engineering
Deliver expert engineering, project delivery, and consultancy services across the energy, chemicals, oil and gas, and renewables industries. As part of px Group, we combine project execution capabilities with our knowledge and skills as owner and operator of Upper Tier COMAH facilities to support all phases of a project lifecycle from concept through to FEED, detail engineering design, procurement, construction, commissioning, and handover.

## Engineering, IT & process consultants

### Gexcon UK Ltd
Safety and risk management and advanced dispersion, explosion and fire modelling. Unique expertise and shared knowledge on how to prevent explosion accidents. Carrying out accident investigations and dedicated facilities for physical testing. Ventilation and dispersion modelling also available. Hazardous area classification and quantitative and qualitative risk analysis and assessment.

### OpenPSM
OpenPSM® is a cloud-based software solution, developed to help businesses manufacturing or handling hazardous chemicals meet the requirements of modern risk-based process safety legislation. Providing a unique framework allowing you to log and assess every aspect of your company’s process safety management programme, OpenPSM® necessarily supports engagement from shopfloor to boardroom, allowing everyone with an active part to play in process safety to have relevant information to hand.

### Siemens Digital Factory & Process Industries and Drives
Siemens Digital Industries (DI) is a global leader in automation and digitalisation, dedicated to driving the digital transformation of the manufacturing and process industries. Their comprehensive Digital Enterprise portfolio offers an end-to-end suite of products, solutions, and services designed to integrate and digitalise the entire value chain. This portfolio is tailored to meet the specific needs of the Chemical Industry, enhancing productivity, flexibility and efficiency. By leveraging cutting-edge technologies and close collaboration with customers, Siemens DI helps businesses achieve greater innovation and competitiveness.

## Environment, health & safety risk management

### Ambipar
The global leader in environmental solutions, operating across six continents. It offers a comprehensive range of services, including emergency response to industrial accidents, hazardous spills, natural disasters, environmental management, waste disposal, sustainable recovery, and specialised training and consultancy. Ambipar supports governments, corporations, and infrastructure networks, ensuring regulatory compliance, risk mitigation, and long-term environmental stewardship worldwide.

### BakerRisk Europe Ltd
Dedicated to help predict, prevent and mitigate hazards and explosions, fires and toxic releases. Specialising in process safety and risk management, we help clients understand their risks and offer cost-effective risk management solutions. Success id delivered through proven knowledge and experience, innovative research and unique engineering capabilities.

### Chemical and Industrial Consultants Association
An association of independent consultants with extensive experience, many having worked in the chemical industry, across various fields. Provision of technical and business advice on almost every aspect of chemical manufacture, development, marketing and management.

### International Fire Protection
Specialises in providing fire safety solutions for high-hazard industries, including COMAH sites, power generation, and hydrocarbon processing facilities. Our expertise includes ATEX and SIL-rated Fire & Gas detection systems, as well as advanced fire detection and protection systems tailored to meet the specific safety needs of these critical sectors.

### Neales Waste Management
A family-owned enterprise with over three decades of expertise, offers specialized hazardous waste services in the North West region. As a key player in the waste management sector, we operate an extensive network of facilities, delivering comprehensive waste solutions to various clients and industries.

### RAS Ltd
Expertise that covers the full range of risk assessment and management services across; safety risk, business risk and environmental risk. Carry out Quantitative risk Assessments and Predictive & consequence modelling, through 'softer' risks affecting an organisation's reputation.

### SLR Consulting
A unique blend of leadership, management, consulting, engineering and training services is offered to the chemicals industry. A forerunner in sustainable process safety management combined with proven business improvement capabilities enables delivery of practical solutions to promote safety and efficiency in design, operation and maintenance of complex hazardous facilities.

### Wareing Consulting
Roger Wareing is a business sustainability/ ESG consultant and former industrial chemist. Roger helps you navigate what ESG challenges mean for your company's future, shaping your response to growing regulatory obligations and rising expectations, and supporting delivery and reporting to drive value creation and resilience alongside wider positive outcomes.

## Facilities, finance and other business services

### Department for Business & Trade
Operational support for British exports as well as facilitating inward and outward investment activity. Support is given to first-time exporters or established exporters requiring more help with accessing more difficult markets or putting strategic alliances in place. Access to expert advice, trade services, training and events.

### Pen Underwriting incorporating OAMPS
Specialist Insurance services to high hazard manufacturing and haulage industries. Motor fleets, property, liability and transit policies. We help clients minimise risk through proactive risk management and a range of training and response services to assist companies in planning for and dealing with incidents and emergencies.

### Sci-Tech Daresbury
We are a national science and innovation campus, and enterprise zone providing a range of office, laboratory and workshop accommodation for technology companies (from a desk to large laboratory and office units). Companies have access to a range of facilities covering material analysis, virtual design & simulation, and rapid prototyping.

### STFC Innovations Technology Access Centre
A unique, fully equipped space for innovation, research and development. Providing flexible access to laboratory space, "hot labs" and scientific equipment. Ideally suited to start-up companies, smaller and medium size enterprises and R&D team from established companies.

### The Henry Royce Institute
The national institute for advanced materials research. Royce was established to ensure that the UK remains at the forefront of materials research and exploitation through collaborations with industry and academia, and by providing access for the UK materials community to state-of-the-art equipment and facilities. Royce's mission is to support and grow world-recognised excellence in UK materials research, accelerating commercial exploitation and delivering positive economic and societal impact for the UK.

### The Procurement Team
Helping clients save money and become more profitable, focusing on their indirect spend such as IT, MRO, Consumables, Transport, Utilities etc. We work with organisations in the Chemical, Pharmaceutical and Life Sciences industries and leverage their combined indirect supplier spend to drive extra savings for all our clients by creating economies of scale.Our team realise that increased buying power translates into savings across the board and inherent value beyond cost, such as improved service levels and vendor reduction.

## Laboratory products, testing and services

### Kemea Ltd
Offering expert formulation services, from concept to creation. With 25+ years of formulation experience, we'll guide you through the development process, focusing on your project needs. We also offer packaging, labelling, and delivery, both in the UK and internationally. Partner with Kemea Ltd to bring your product vision to life.

### Metrohm
one of the world's most trusted names in high-precision instruments for chemical analysis. With a legacy of innovation and reliability, Metrohm is committed to delivering pioneering, sustainable solutions to customers across the globe. As a globally active company, Metrohm embraces its economic, social, and environmental responsibilities. We don't just innovate - we act with purpose.

### Scymaris Ltd
We offer high quality and cost-effective ecotoxicology, environmental fate, and chemistry services to the global agrochemical, pharmaceutical, industrial chemicals & animal health industries. Our state-of-the-art laboratory is equipped with controlled temperature rooms, freshwater and seawater testing facilities and is accredited to work according to GLP and most Global regulatory requirements.

### Total Lab Supplies (TLS)
Your trusted partner for laboratory equipment, chemicals, and supplies. With years of industry expertise, we offer a diverse range of high-quality products and expert support tailored to the needs of researchers, scientists, and professionals across various industries.

## Legal & patents

### Appleyard Lees LLP
Patent and trademark attorneys. Aim to obtain the best possible patent protection for clients. Experience of product clearance against competitor patents and in due diligence for mergers and acquisitions. Advice on licensing issues and collaboration agreements relating to IP.

### Bawden and Associates
A legal firm providing professional services across all IP matters. Drafting and prosecution of patent applications, handling opposition and appeals in the EPO and in litigation in UK and international courts. Business led and strategic approach to generate assets of real commercial value.

### Mathys & Squire LLP
Mathys & Squire LLP is a full-service intellectual property law firm with industry-leading expertise in patents, trade marks, design protection and IP litigation and including a dedicated chemistry team of highly experienced attorneys holding higher degrees and research or industrial experience who are passionate about innovation in the chemical field.

### Squire Patton Boggs (UK) LLP
Global legal company providing legal, regulatory and advocacy assistance to the chemical and performance material industries. Expertise that emphasises areas that mean the most to industry such as environmental, mergers and acquisitions, commercial finance, construction, litigation, Ip, public policy and international expansion.

### WP Thompson
Intellectual property attorneys providing high quality advice to start-ups, SMEs or FTSE 100 companies. Team of experienced IP attorneys specializing in chemistry and life sciences, with first degrees and PhDs in these fields. Securing the most appropriate, cost effective and commercially valuable protection for your intellectual investment and innovation.

# Know your supply chains

## REACH and chemicals services

### Chemical Processing Services Ltd
[CPS] provides innovative technology and/or niche speciality polymers with a focus on an absence or reduced CMR content and regulatory compliance, sustainability, and high process or technical performance.

### CIRS
CIRS Group was established in 2007 and is a leading product safety and regulatory consulting firm. It utilizes its technical expertise, resources, and international network to provide comprehensive compliance services including chemical notifications and registrations, global GHS compliance, laboratory testing, R&D, and data services across multiple industries globally.

### Dr Knoell Consult Ltd
An independent service provider for the chemical and related industries. Globally the Knoell group has over 450 employees covering all aspects of regulatory compliance for industrial chemicals, agrochemicals and biocides: e.g., strategic planning, dossier preparation, exposure assessment, SDS preparation, and from REACH to K-REACH!

### GlobalMSDS
A complete safety data sheet/literature and regulatory service for your entire product communications in any language, style and format required. Hazmix is a new 'pay as you go' web-browser product that is setting a new standard in SDS authoring. A Solutions service that also provides technical advice.

### Intertek Regulatory Services
Health, environmental and regulatory services for implementation of chemicals management. Worldwide registration of chemicals, food contact compliance and notification, global chemicals compliance, design/optimisation of toxicological and eco-toxicological studies, hazardous substance management, EU cosmetic and biocidal products compliance, classification & labelling, SDS consulting.

### WSP in the UK
Recognising that chemical companies face a wide range of regulatory challenges, WSP's centre of excellence can assist companies with chemical compliance and safety obligations. The team's role is to facilitate a company's route to compliance in areas such chemical registration (including EU and UK-REACH), supply chain management, GHS/CLP and DGSA, amongst other safety related services.

### Yordas Group
Yordas Group is a leading provider of scientific, environmental, human health and global regulatory consulting services. They offer chemical regulatory support, expert scientific services and support on chemicals management and product stewardship, global hazard communication, hazard and risk assessment, analytical and (eco)tox testing.

## Recruitment

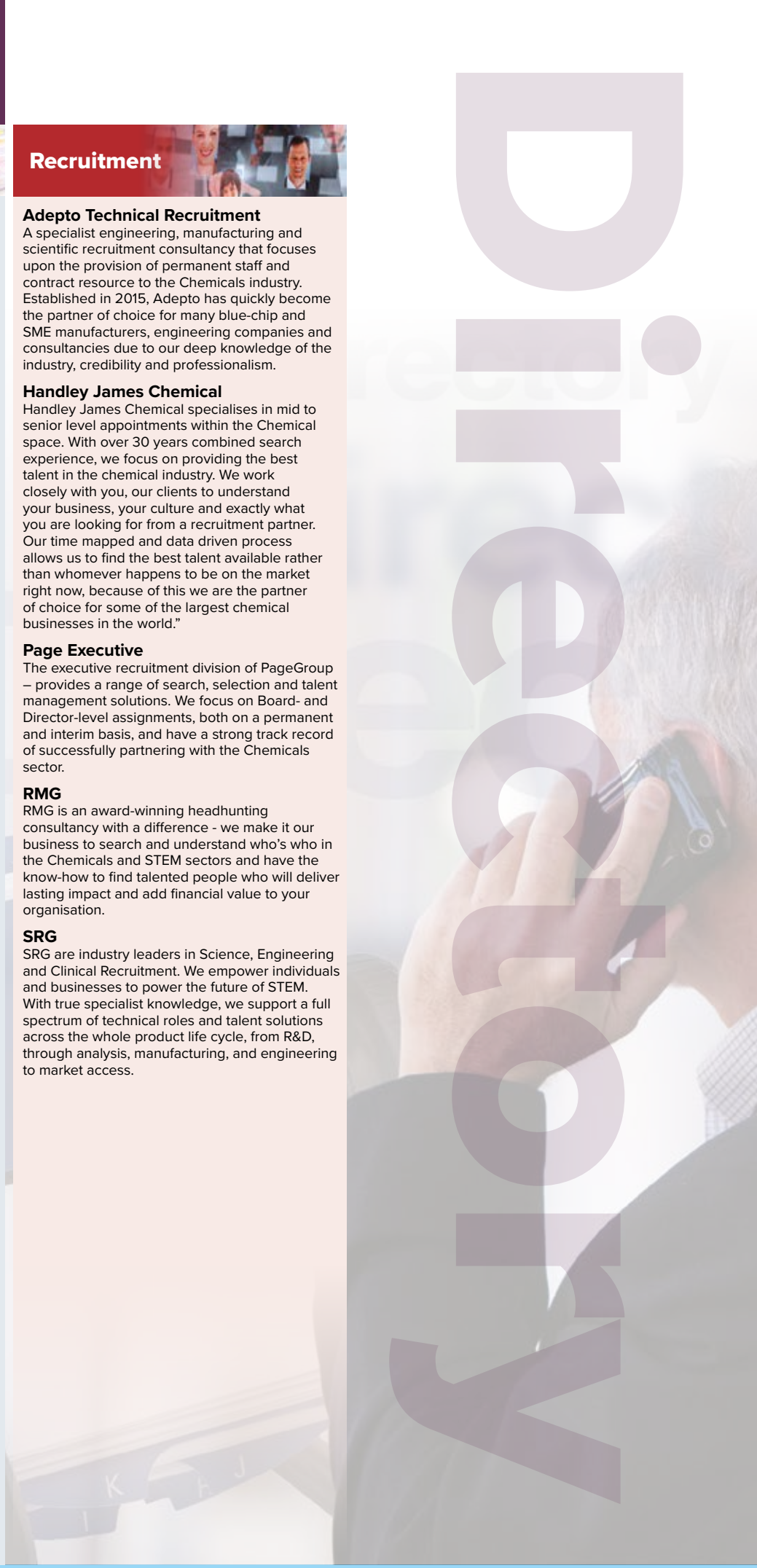
### Adepto Technical Recruitment
A specialist engineering, manufacturing and scientific recruitment consultancy that focuses upon the provision of permanent staff and contract resource to the Chemicals industry. Established in 2015, Adepto has quickly become the partner of choice for many blue-chip and SME manufacturers, engineering companies and consultancies due to our deep knowledge of the industry, credibility and professionalism.

### Handley James Chemical
Handley James Chemical specialises in mid to senior level appointments within the Chemical space. With over 30 years combined search experience, we focus on providing the best talent in the chemical industry. We work closely with you, our clients to understand your business, your culture and exactly what you are looking for from a recruitment partner. Our time mapped and data driven process allows us to find the best talent available rather than whomever happens to be on the market right now, because of this we are the partner of choice for some of the largest chemical businesses in the world."

### Page Executive
The executive recruitment division of PageGroup – provides a range of search, selection and talent management solutions. We focus on Board- and Director-level assignments, both on a permanent and interim basis, and have a strong track record of successfully partnering with the Chemicals sector.

### RMG
RMG is an award-winning headhunting consultancy with a difference - we make it our business to search and understand who's who in the Chemicals and STEM sectors and have the know-how to find talented people who will deliver lasting impact and add financial value to your organisation.

### SRG
SRG are industry leaders in Science, Engineering and Clinical Recruitment. We empower individuals and businesses to power the future of STEM. With true specialist knowledge, we support a full spectrum of technical roles and talent solutions across the whole product life cycle, from R&D, through analysis, manufacturing, and engineering to market access.



# SLR

SLR has decades of successful experience advising clients throughout their project life cycle.

- Process Safety
  - COMAH
  - HAZOP
  - HAZID
  - DSEAR
- Environmental Management, Permitting & Compliance
- Corporate Sustainability Strategy
- Acoustics & Vibration
- Air Quality
- Planning

A global leader in full spectrum sustainability solutions, providing clients with strategic advice and on the ground support.

Making Sustainability Happen

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Find out how we can make a positive change together at:

SLRCONSULTING.COM