

A unique industry, with unique companies and unique news

elements

In this issue:

- *Coronavirus – a practical guide for business owners*
- *Coronavirus Contingency Planning: Key Considerations*
- *Business driver safety*
- *Risk and tolerability criteria*
- *Catalyst gives Isaac Newton space sapling a home*

2020

Save the date!

Chemicals Northwest Awards

March Event Postponed
NEW Date: 15th September 2020

We are delighted to announce that the next Chemicals Northwest Awards dinner will be taking place on the 19th March 2020 at the Hilton Manchester Deansgate.

Further details to follow



Chemicals
northwest



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RISK & HAZARD MANAGEMENT

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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? See over for details or please contact:

Alex Abraitis - Member services and events manager
alex.abraitis@chemicalsnorthwest.org.uk or visit:

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

2020 rates

Micro corporate membership	(1 - 10 employees)	£434+VAT
Standard corporate membership	(11-100 employees)	£755+VAT
Large corporate membership	(100+ employees)	£961+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,

There is much uncertainty in the UK and the world as this edition of Elements goes to print. I want to start by saying we hope you are all keeping well, staying safe, looking out for your families, your neighbours and yourselves. Our sister organisation the Chemical Industries Association has worked very closely with Government to ensure that our (your) industry and its brilliant workforce are recognised as critical workers during this period. Plants must remain operational, where they responsibly can, and so must the supply chains. Our products go into all sectors and services including the NHS. Thank you all for your ongoing contribution.

Our awards dinner which was postponed from the 19th March has now been rearranged for 15th September at the Hilton, Manchester Deansgate.

In February we were pleased to work in conjunction with Clarke Energy on an event hosted at the University of Liverpool titled "The sustainable future of industrial energy." Clarke Energy were proud to showcase the 3.4MW Combined Heat and Power Jenbacher gas engine installed in 2009. The engine provides baseload electricity along with heat for the whole of the university campus. Further details of this event can be found on page 24-25. We look forward to hosting our April Brexit Group meeting and a May breakfast event and welcome all of you to attend. We are looking at how these events might be delivered "virtually".

Please keep an eye on our website pages for future events, the latest news, industry updates and our current Elements magazine -

<https://www.cia.org.uk/chemicalsnorthwest/>

Alex Abraitis

Member Services and Events Manager

About us...

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

With around 160 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.

Chemicals Northwest really does bring people together! It is an essential feature of successful networking strategies used by many organisations. We coordinate a range of meetings and events to enable 'face to face' networking for the benefit of all members. Every successful business networking organisation also needs effective communications channels.

As a result of gradual development over recent years, getting messages across, promoting member companies and reporting news, Chemicals Northwest has reached new levels of topicality and quality. Here are the the main features and benefits of membership...



Annual Awards Dinner - During the annual CNW awards programme we are privileged to witness the many achievements made in our local sector. Culminating in a great night of celebration each year's awards are a fantastic way your company can support the region's chemicals sector and help raise your own profile. Up to 300 guests from across the industry gather on the night and everyone can see for themselves the amazing achievements made by our people and organisations.

"Focus 50" - This recently named series of seminars and networking events is becoming ever more popular.

Over the years CNW has focused on a range of highly topical and relevant business issues. Technical, regulatory and operational insights have been delivered by experts in their fields. These events ensure good practices are shared and all gain new knowledge. As businesses get to grips with the changing landscape there will always be new issues for members to analyse.



Breakfast Networking - Chemicals Northwest is gaining a growing reputation for high quality breakfast networking events. With no specific theme, delegates are encouraged to make new contacts and some will make short pitches about their company, its products and services plus news announcements! The breakfast meetings have proved to be very popular and currently run on a 2 monthly basis attracting an average of 40 people each time. New contacts can lead to new opportunities and new business. All are welcome.

Common Interest Groups - Chemicals Northwest's **REACH** group has followed closely the developments within this complex and long term piece of legislation. The initiative allows the sharing of experience, best practice and knowledge between manufacturing, supply chain and support service providers, all with a keen interest in REACH. The group meets three times a year and now has a membership of over 50 companies.

CNW started the **Brexit** user group straight after the referendum in 2016 and it is gaining more and more support from membership. Whilst there is still uncertainty, many businesses will be looking to the future impacts, so we are enabling all interested parties to meet and discuss in more detail their common issues and concerns. Up to date information, expert insights and reports form the basis of each agenda, which will run parallel to the national work carried out by CIA.

elements magazine - CNW produces an informative quarterly magazine called elements which contains the latest round up of member news, specialist features and 'spotlights' on new member companies. This is a great opportunity to establish an association between your organisation and important sector issues, by contributing free editorial and press releases. Companies who do business in the chemicals sector may also wish to look at advertising options. The CNW sector directory is now integrated into elements.

Website - Visits to the CNW website have almost doubled in the past 12 months. The website is regularly updated with industry news and the events programme. Companies are increasingly using it for enquiries and advertising. There is an efficient "e-shot" function which allows direct messaging to our contacts list. Viewers of the directory pages can search the whole of our supply chain providers to find where to buy products and services.

LinkedIn - The Chemicals Northwest LinkedIn group was created in the latter half of 2010 and has an ever increasing membership, with over 1300 members now connected. The group provides the opportunity for chemical industry professionals to share ideas and knowledge.

Twitter - The CNW Twitter account is growing, so to hear about the latest news from CNW and the wider sector, why not follow us.

In addition we'd be happy to re-tweet any news or updates that members themselves tweet.





**Future
Forum**

Making
tomorrow
happen

CIA Chemical
Industries
Association

What is the Future Forum?

Future Forum is a network of people working in chemical and pharmaceutical businesses located in the UK.

Members are either at the start of their career or keen to broaden their skills and voice their opinions on behalf of the UK chemical industry.

Why join?

If you're a professional working in the chemical industry – get involved!
Joining Future Forum offers a number of benefits:



Forum Connect

Monthly e-newsletter keeping you informed about the latest news, events and policy developments.



Get your voice heard

Get involved at the heart of CIA's policy making and lobbying activities.



Advice and guidance

Information for you and for those following in your footsteps.



Networking and events

Expert speakers, skills sessions and the opportunity to meet with other industry professionals in a relaxed environment.

You can be in any profession in a chemical or pharmaceutical business to join – plus membership is free!

**Join
TODAY!**

You can join by registering at www.cia.org.uk and going to 'My CIA' to sign up to the CIA Future Forum mailing list. You'll then start to receive the Forum Connect – meaning you'll be kept up to date with Forum news, opportunities and details of our upcoming events!

FutureForum@cia.org.uk



www.cia.org.uk

Coronavirus - a practical guide for business owners

IT'S no exaggeration to say that the global coronavirus pandemic has caused the greatest peace-time economic shock in history.

As governments around the world have imposed restrictions on individual movement and closed borders in bid to stop the virus spreading, hitherto profitable and viable businesses across multiple sectors including aviation, hospitality, events and retail have been plunged into a deep and uncertain crisis.

So, what can businesses do in such unprecedented challenging and uncertain times?

While we await the introduction of the Chancellor's £330bn economic package to support the economy announced last week and then subsequent pledge to support employees' wages, we've produced a seven step guide which businesses should find helpful if they find themselves impacted during these unprecedented times.

1. Remember cash is king

Companies that have not faced a liquidity crunch before can find the actions needed to change their cash flow management processes overly demanding. However, moving to a receipts and payments basis, daily forecasting and integrating short- and medium-term forecasts almost always increases headroom, runway time to implement other actions and confidence with shareholders and lenders.

2. Be proactive in speaking to your lenders

The more notice that you can give your debt provider of the potential impact of coronavirus on trading performance and liquidity, the more chance there is of getting the flexibility you may need.

3. Prioritise existing shareholders

While new money could be raised from third parties, it will potentially be both expensive and a difficult process. Most often, the existing shareholders and lenders to your business should be your priority.

4. Working capital modelling is essential

Certain types of debt facilities are more-quickly impacted by downturns in trading. This is especially so for asset-based facilities where available funding is driven by debtor and stock levels. Careful modelling of the impact of trading on headroom levels is essential.

5. Review temporary finance options

Other sources of temporary financing include deferral of monies due to HMRC through a 'time to pay' arrangement, customer payment profiles and asset specific finance.

6. Stress testing

Stress testing forecasts for different impact scenarios will help provide better clarity on the sufficiency of liquidity and inform the required actions and asks of financial stakeholders.

7. Compliance

Check your compliance with the covenants and obligations in your various debt facilities, including the representations that have to be made on any drawdowns.

We hope you find these steps useful and it makes sense to revisit as the situation evolves – to discuss any queries related to the impact of the coronavirus on your company, or if you are concerned about your responsibilities as a director as a result of liquidity issues, please contact me, or one of the team.

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RISK & HAZARD MANAGEMENT



"We cannot solve our problems with the same level of thinking that created them." Albert Einstein

Understanding and facilitating the effective management of risk is our core business. Our expertise covers the full range of risk assessment and management services across:



Safety Risk



Business Risk



Environment Risk

Only when the risk facing an organisation is well understood can it be effectively managed. Key to the successful identification, assessment and management of risk is engagement with the right people, using the right processes at the right time. We believe we are different to many of our competitors and our approach is distinctive, we don't always walk the well-trodden path but look at each client's particular risk context and develop a tailored solution, working in partnership with our client.

We work across all aspects of risk, from Quantitative Risk Assessments and Predictive & Consequence modelling, through to the 'softer' risks which may affect an organisation's reputation.

Risk and Tolerability Criteria: Are we comparing apples and pears?

Risk is a somewhat nebular concept, particularly in the context of major accidents. Although we are often driven to try to make it as precise as possible, there are inevitably several assumptions required to narrow down the inputs to a single number. A lot depends on the outcome of risk assessment; including how we focus resources to manage our more significant hazards. It is important to understand the results of an assessment and where they come from. How risk is presented is vital in how it is perceived and managed, but how can an intangible concept be made into something more material?

Tolerability as a Driver

One driver for presenting risk as a number is to compare it to tolerability criteria. When presenting the outcomes of risk assessment, a clear understanding of what is being assessed or calculated is required. Aggregated (or societal/group) risk determines the total risk based on the number of people affected and the frequency of the relevant event, whether that is one scenario or multiple hazards. Individual risk, however, considers the total risk to a single person from all hazards on an establishment.

HSE guidance is helpful in providing tolerability criteria for individual risk, often referred to as the ALARP triangle, however there is less clarity for societal risk.

An F-N graph can be developed to illustrate criteria for societal risk using HSEs 'Guidance on ALARP Decisions in COMAH'. The graph plots the cumulative frequency of events at an establishment per year (F) against the number of fatalities from all events assessed (N), allowing for the position of the assessed risk against the societal risk criteria to be presented.

It is important to consider that the risk criteria provided by the UK regulator are intended for the judgement of facility risk. Thought should therefore be given to whether or not adjustments are required for single and representative scenarios. By far the majority of risk assessments conducted are for single scenarios, and so direct comparison to the HSE tolerability criteria is not appropriate.

Communicating Risk

It doesn't matter how detailed a risk assessment is if it cannot be communicated to decision makers and those

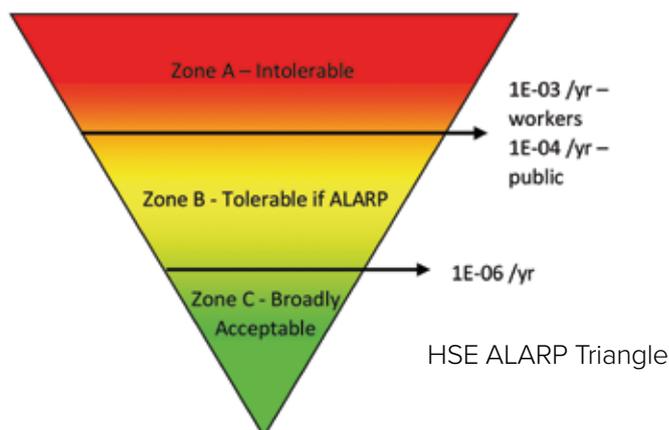
exposed to the risk. Communicating a risk assessment should be more than a pass or fail against tolerability criteria.

In many contexts, the go-to for risk presentation is a matrix. Matrices are simple and visual, but it should be remembered that they are most appropriate for societal risk and can be misleading if tolerability is defined based on individual risk. A matrix certainly presents a risk picture, but it is only useful when the resolution and the tolerability criteria presented reflect its purpose.

Employers must share safety information with whomever it might affect. How this information is shared can be proportionate to individual roles and their responsibilities for risk management. Presenting risk against tolerability isn't necessarily the best way to help decision makers allocate resources in the right places and is less helpful to other roles that may simply need to know the key hazards and what to do in an emergency. Consider the most appropriate way to ensure that the message is being received. Is a high-level awareness of hazards enough for the wider workforce, and how can the competence of leaders in understanding risk be assured? Note the focus on leadership by the COMAH Competent Authority this year means that, more than ever, these assurances must be in place and auditable.

The consequences of misunderstanding risk can be significant and so the method used to present risk must adequately reflect what has been assessed. It must be aligned to the correct tolerability criteria and reflect the scale of hazard being assessed.

Separating the concepts of risk tolerance and risk management can help make understanding of risks accessible and provide greater assurance that resources are focussed in the right places.

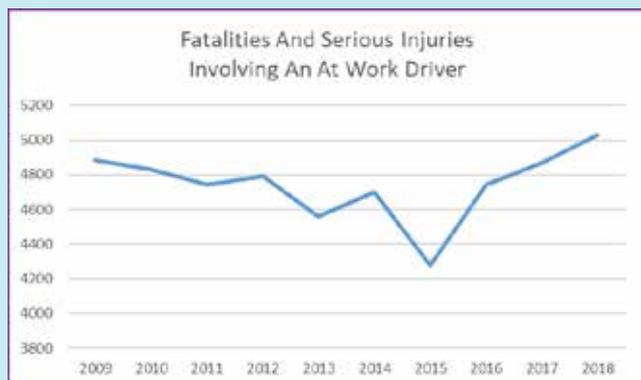


Carolyn Nicholls & Jennifer Hill
- enquiries@ras.ltd.uk

Business driver safety

For most of us operating away from hazardous activities as our day job, driving on company business represents the greatest occupational exposure to serious injury or death.

According to a recent white paper by IAM RoadSmart (formerly the Institute of Advanced Motorists) despite the reduction in overall fatalities in the past 10 years, the number of fatalities and serious injuries involving an at work driver has actually increased.



The paper also highlights some worrying practices and attitudes when it comes to some employers and their drivers:

- 49% of business leaders polled expect their employees to answer their phone at any time, including while driving for work;
- 13% of employees who drive for work and 6% of leaders consider the hard shoulder a safe place to take a work call;
- 17% of UK employees who drive for work say they have been involved in an incident when driving for work due to a phone call from a colleague

The report also highlights the issue of the grey fleet drivers – those using privately owned vehicles for work-related journeys. Employers' obligations to these drivers are the same as for a company car driver, so they still need to exercise their responsibility for staff health and safety.

Many companies will have drivers who sit adrift from their peers in terms of penalty points, RTC's and general performance, but dealing with below par performance is often seen as too difficult in the current job market.

Replacing an unsafe driver is not always something employers want to pursue, but with increasingly sophisticated telematics data creating an evidence trail which is difficult for employers to claim ignorance of, and the recent case involving Midland Red (South) Ltd which resulted in a £2.3m fine following a series of missed warning signs regarding driver performance, it's becoming more likely that the Corporate Manslaughter

Act will finally start to underpin safer business driving.

21st century communications are another serious barrier to driving down road casualties at work. Although the use of hand-held telephones by motorists was banned in the UK in 2003, information released by the Department for Transport shows that using a mobile was a contributory factor in 117 crashes (25 fatalities and 92 seriously injured) on Britain's roads in 2018.

However, the true mobile phone death and injury count (including crashes caused by hands-free phone calls, which is often not included in official statistics) is probably far higher.

For many at-work drivers, keeping in touch with their managers is seen as essential, but given there is significant evidence that drivers talking on a phone are impaired (regardless of whether the phone is hand-held or hands-free) more than by having a blood alcohol level at the UK legal limit, it's becoming more common for managers to only talk with employees when they are stationary.

So what can you do?

Having a comprehensive driver handbook outline the responsibilities of both the employee and the employer; it should include the use of hand's free mobile phones, but should also extend to the use of employees own personal vehicles, expectations or consequences around penalty points being incurred, being unfit through drink or drugs and the amount of time spent behind the wheel for both HGV and non-HGV drivers.

Embrace technology – telematics can be used to identify poor driving, enabling employers to target tailored training, or show if employees are behind the wheel for too many hours, and could be beneficial in preventing incidents occurring. It also improves fuel economy in most cases when first implemented!

Ensure your vehicle checks are robust, and the output recorded – the increasing numbers of multi-agency compliance events on UK roads (bringing together the Police, HSE, DVSA, HM Revenue & Customs and Highways England) frequently produce 80-90% non-compliance rates (with an average of two offences per vehicle) which could cause problems with Operator Licences.

Assess all new drivers (including eye tests) and have a training process in place which is triggered after an RTC or if your telematics system flags performance issues, as well as scheduled periodic follow-up assessments.

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Coronavirus Contingency Planning: Key Considerations

It has been reported that nine out of 10 businesses do not have adequate policies in place for handling a pandemic. Increasingly, businesses in the chemicals sector and other organisations need to understand what they should be doing to mitigate the impact of the coronavirus disease 2019 (COVID-19), commonly known as the “coronavirus”, on business operations, including legal requirements, staff wellbeing, commercial obligations, funding, director’s duties, supply chain issues and much more.

Contingency plans can provide a structure for management and implementation of measures intended for such mitigation. However, issues and government responses connected with the coronavirus have escalated, and are still escalating at such a rate that such plans need to be devised quickly, and continually adapted to reflect updated advice over a period of time.

There are several issues that may need to be addressed in such planning, falling into three main areas:

- Financial Health
- People/Employees, including Health and Safety
- Supply Chains, including Manufacturing and Logistics

Risks may arise in each of these areas, due to factors such as disruptions in supply (assessments of the risks posed to supply chains may be helpful, including factors specific to high-risk suppliers and working conditions); disruption in transport and/or logistics (again, assessments of risks posed could be useful); workforce availability; changes to demand; forced closure of business premises/temporary suspension of activities; and/or reputation damage due to poor communication; or any of the above.

To address these risks, it may be helpful for businesses to adopt a phased contingency plan. Initially, steps should deal with the containment and limitation of risks and threats to business-critical activities. However, in the event of an increased likelihood of risks and threats (as indeed is now the case for several sectors, such as hospitality), elevated precautions could form part of a second phase of more stringent measures. In the event that risks and threats to business-critical activities materialise (despite the precautions taken), there may also be a further phase of measures that become necessary.

The purpose of a contingency plan is to enable the operations of a business to continue so far as practical, unimpeded, if the coronavirus disrupts normal operations and working practices (which it now seems almost certain to do). As such, the plan should consider and be specific to the circumstances of the relevant business, including:

- i. The objectives and business-critical activities of the company
- ii. The company’s understanding of the threats and risks to those activities from the coronavirus and the potential impact of those threats and risks
- iii. The proposed measures and steps to control or limit the threats and risks identified
- iv. Where the likelihood or frequency of a risk cannot be controlled by the company, the proposed measures to limit the impact on the company, and
- v. The intended strategies for business recovery within defined timescales, in line with the risks identified

Existing crisis management or business continuity plans should be referred to and adapted if possible.

We offer a self-assessment of your contingency arrangements using an online tool. Upon submission of your self-assessment, you will be sent a copy of your response within 24 hours, which will highlight areas that you may still need to address. This will be followed up with anonymised benchmarking information collated from assessments completed by other clients and contacts. You will also be offered a template for a contingency plan (designed to help consider, formalise and document your contingency arrangements).

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Chemical importers are on the hook for TSCA risk evaluation fees

Is your company potentially liable for a share of the U.S. Environmental Protection Agency (EPA) \$1,350,000 fee for developing a Toxic Substances Control Act (TSCA) risk evaluation? This is a hot topic these days, given EPA's notice dated January 27, 2020, identifying the "preliminary lists" of manufacturers, including importers, of the 20 chemical substances that EPA has designated as "high-priority" substances for risk evaluation and for which fees will be charged. Stakeholders are required by March 27, 2020, to "self-identify" as manufacturers of a high-priority substance irrespective of whether they are included on the preliminary lists identified by EPA.

Background

EPA published on December 20, 2019, the final list of 20 high-priority chemicals. These chemicals will be the next chemicals to undergo risk evaluation under TSCA Section 6. The 20 chemical substances consist of seven chlorinated solvents, six phthalates, four flame retardants, formaldehyde, a fragrance additive, and a polymer precursor.

EPA developed each preliminary list based on data submitted to EPA, including information submitted under TSCA's Chemical Data Reporting (CDR) Rule and the Toxics Release Inventory.

Requirements under the Fee Rule

Companies that have manufactured or imported any of the 20 high-priority chemical substances in the past five years before January 27, 2020, must submit a notice to EPA of that fact. This is true even if a company appears or does not appear on any EPA preliminary list, hence the "self-identification" requirement.

Companies may certify to EPA that they have not manufactured the chemical in the five-year period preceding January 27, 2020, or certify that the company has ceased producing or importing the substance prior to March 19, 2019, the day before EPA initiated TSCA prioritization for the substances, and certify that they will not do so again in the five years following the publication of the preliminary list, or until January 27, 2025. Companies that have manufactured or imported

any of the 20 high-priority substances on or after March 20, 2019, cannot avoid the fee obligations.

Companies are obligated to pay a portion of the fee even if the manufactured or imported chemical is considered an impurity or byproduct, even if it is found in trace amounts. There is no de minimis threshold exemption. Similarly, if an article is imported and contains any of the 20 high-priority substances, the importer is subject to the fee obligation.

Fee discounts are available to small businesses. The final use fee rule extends an 80% discount in the fee amount for small businesses.

In the event an entity otherwise subject to the fee obligation neglects or declines to be identified as a potentially responsible entity, EPA reserves the right to seek enforcement of TSCA and views each day of failed payment as a separate actionable event subject to penalty. The maximum statutory amount per day for a penalty is \$40,576.

Why the Fuss?

Companies that import products that are mixtures, consumer products, for example, paint formulations, or manufactured goods like furniture (since formaldehyde is among the 20 high-priority chemicals), all are on the hook for the TSCA fee obligation. Manufacturers of articles containing any of the 20 high-priority chemical substances are on the hook, regardless of whether the chemical is incapable of being released or whether the chemical has no end use or commercial purpose separate from the article of which it is a part.

What to Do?

Time is short, so manufacturers, including importers, should review immediately the preliminary lists in EPA's docket. If your company's name is listed and even if it does not appear on these lists, if your company has manufactured or imported any of the 20 high-priority chemicals since January 27, 2015, as a neat chemical or as an impurity, byproduct, or in an article, EPA expects you to self-identify by March 27, 2020.

Chemical stakeholders must remain vigilant of their TSCA obligations and which chemicals are identified by EPA as high priority (as this process will play out for decades). Importers must be aware of their suppliers' product content. TSCA compliance has never been more important, and the risks of non-compliance have never been more consequential.

By Lynn L. Bergeson - <http://actagroup.com/>

Off-Payroll Workers: What you need to know about IR35

It would have taken a monumental occasion to derail the introduction of the IR35 / Off Payroll Worker changes for the Private Sector from 6 April 2020, and a global pandemic has achieved this feat with the announcement late last week of a deferral to 6 April 2021.

This will provide welcome breathing space for businesses and contractors alike given the new rules place a heavy burden on medium and large companies (and will have a knock-on impact for small companies providing services to larger corporates).

That said, this is only a deferral and given that it was announced late in the day, a number of business have already taken action and used it as an opportunity to review their contractor population.

So what's the big deal? Where a company engages an individual directly, it's up to that company to pay the individual correctly – whether gross or through the payroll. Previously, the burden of responsibility shifted when the company engaged an individual through their Personal Service Company (PSC), and effectively shielded the company from any requirement to operate Pay As You Earn (PAYE) or National Insurance Contributions (NICs). This all changes from April 2021, with the burden for assessing whether the engagement is akin to an employment falling on the end user.

Do the new rules apply to me? If you are a medium or large company (or group) who engages contractors through intermediaries, then yes. If you are a small company that provides services to a medium or large company, expect them to get in contact.

If you are a medium / large company (ie you meet two of the following: more than 50 employees; turnover over £10.2m; net assets over £5.1m)

Go through the process of Identifying and Assessing your contactor population and taking Action.

Step 1: Identify

The first stage is to identify the engagements which require assessment where you are receiving the individual's personal service. Identification can be a tricky process as it's not always clear whether you are receiving 'personal service' or whether a relevant intermediary is involved.

Step 2: Assess

Following this, assess their employment status as if they were engaged directly. Employment status is a tricky issue because there is no hard and fast definition. It is dependent on a range of factors, including considerations such as the degree of control over the work, whether the individual bears any financial risk, whether they are in business on their own account, and whether they can send a substitute in their place. Each factor carries a different weighting which may tip the scales either towards employment or self-employment.

Step 3: Action & Monitor

Come April 2021 the outcome of the employment status assessment must be communicated to all relevant members of the contractual chain. This will include the individual and their intermediary, but may also include other entities such as agencies.

Where a contractor is identified as an employee, then payments to their intermediary will be subject to PAYE, Class 1 NICs, and the Apprenticeship Levy.

Ongoing monitoring will then be important, making sure processes and procedures are in place to ensure that all relevant engagements are assessed, all status determinations are communicated, and payroll withholding is operated where necessary.

The new rules are expected to have profound implications on businesses. Some companies are opting to treat all contractors as employees, which is a costly solution and can lead to significant loss of talent. Although the initial administrative work can be time-consuming, putting the right processes and procedures in place early on can save time and money in the long run. The deferral to April 2021 should allow businesses an opportunity for a more nuanced approach.

If you are a small company providing Personal Services to larger corporates

Be proactive in contacting your clients to discuss their approach to the Off Payroll Working legislation. Whilst much of the burden falls on the larger corporates, being forewarned is being forearmed!



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The opportunities we must take from failure

Bill Gates once said “It is fine to celebrate success, but it is more important to heed the lessons of failure.” This is an important lesson in many areas of our lives, both personal and professional, but in the world of functional safety it gives us a rare opportunity to seize the learnings from the failures we observe on our plant and turn them into an opportunity to save money, time and effort.

The Functional Safety Standard IEC 61511-1 (2015) tell us that where we see discrepancies between expected behaviour and actual behaviour of the Safety Instrumented System we should analyse those discrepancies. If we, as operators, can collect data about how our safety instrumented functions actually perform, as opposed to how it was assumed they would perform at the design stage, it is possible we can revisit old assumptions, and replace them with something that is both more accurate and, often, less conservative. So, what is in it for us?

The functional safety journey starts long before a plant is operating. Assumptions are made about how hazard scenarios will develop; how reliable our safety layers are and ultimately what the residual risk is for that hazard manifesting at our facility. We reach those conclusions based on a data set that is, by necessity, conservative. It is rare that in the early stages of a project we have “proven-in-use” data to base our assumptions on, so we reach for the generic data books or ask our manufacturers to provide that data to us. As we follow through the functional safety lifecycle, this data gets embedded into our design. We use it to determine if we need to add extra layers of protection. We use it to verify that our safety instrumented functions meet the safety integrity level requirements. We use this data as a basis for setting our Proof Test intervals for the ongoing operations and maintenance phases.

Using this conservative data is the right thing to do, but we must ask ourselves, how can we get better data? The answer is that we need to incorporate robust procedures for collecting data related to the demand rate and SIS reliability parameters into our operations. IEC61511-1 points this out to us:

“Collection and analysis of failure data has many benefits including the potential to reduce maintenance costs if failure rates in operation are significantly lower than what were predicted during design. Implementation costs of new installations can also be reduced because new designs can be based on less conservative failure rates.”

What should we be doing?

Firstly, we must identify the type of data we should capture. Once again, the Standard points us in the right direction.

- the demand rate on each SIF;
- the actions taken following a demand on the system;
- the failures and failure modes of equipment forming part of the SIS, including those identified during normal operation, inspection, testing or demand on a SIF;
- the cause of the demands;
- the cause and frequency of spurious trips;
- the failure of equipment forming part of any compensating measures.

We can then start to envisage the type of recording we do on plant, and the training that people need to correctly capture failure data to the necessary level of detail. For the small amount of investment in putting together a procedure and associated paperwork, there is the potential for real cost savings. In addition, putting these systems in place will demonstrate compliance with the functional safety standard and adherence to best practice.

“The price of light is less than the cost of darkness” - Arthur C. Nielsen

Author: Clare Dunkerley is a Process Safety Consultant at Otto Simon Limited. Clare is a TUV Rheinland certified Safety Instrumented Systems Engineer specialising in Functional Safety, including Functional Safety Management, LOPA, SIF architecture design, software specification and functional safety assessment. Clare has a background in DCS and process design engineering, and has worked as lead engineer for relief system studies for multiple clients and DCS and SIS application design engineer for plants in the chemical, petrochemical and waste management sectors.



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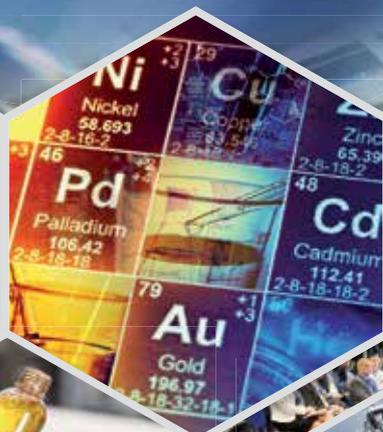
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CHEMUK 2020 Preview

Visitor registration has now opened for **CHEMUK 2020, the UK chemical industries national expo**, being held on **16th & 17th September at EventCity in Manchester**.

Presenting over 270 exhibitors and 100+ expert speakers, CHEMUK 2020 is the only large-scale trade show that brings together the UK's chemicals, chemical processing and chemical product formulation industries, providing an intensive 2-day supply chain sourcing, business networking, intelligence gathering, innovation showcasing, best-practice and strategy development experience.

Following the show's successful launch in Harrogate last year, event organiser, UK Industry Events, took the decision to move the show to the largest event space in the North, EventCity, Manchester, to facilitate the huge industry demand.

Founder and Managing Director Ian Stone said: "We're delighted to be bringing CHEMUK 2020, doubling in size, into the heart of the crucially important North West chemical region. With some 270+ exhibitors and 35+ hours of expert speaker programmes, attendees will have the biggest names, solutions & themes under one giant roof"

Supply Chain Expo:

CHEMUK 2020 will provide visitor groups with a diverse and impressive showcase of 270+ specialist exhibitors showcasing latest plant, equipment, materials and services supporting the chemicals industries, driving product innovation, plant & process performance, future-proofing, supply-chain fulfilment, safety, compliance and more.

Just some of the major names across the CHEMUK 2020 show floor include: 2M Services, Brenntag, Actikem, ARI-Armaturen UK Ltd, Atlas Copco, Azelis, BTC Europe, Busch (UK) Ltd, Calgavin, Edwards Vacuum, Emerson, Endress+Hauser, GEMU Valves, George Fischer Sales, Gericke Ltd, GRUNDFOS Pumps Ltd, HRS Heat Exchangers Ltd, Yokogawa UK, Libra Specialty Chemicals, Monarch Chemicals, Kinder-Janes Engineering Ltd, NETZSCH Pumps & Systems UK Ltd, NewsonGale, ProMinent Fluid Controls (UK) Ltd, Schenck Process UK Ltd, Siemens Plc, Tradebe Chemicals, VEGA Controls Limited.. to name a few.

CHEMUK 2020 Speaker Programme

The CHEMUK 2020 speaker programme will present over 100 speakers, providing 35 hours of 'free to attend' expert intelligence, case studies, best practice and tech-insight 'snapshots', to inspire and assist next level investment, as well as guide technical and operational strategies for attending industry groups across the UK chemicals & chemical product sectors.



Packed this year with specialist highly topical contributions from 25+ separate trade, technical or professional bodies, three government departments, multiple centres of research/tech transfer, together with an exciting cross-section of leading chemical suppliers, technology partners & specialist service & consultancy groups, CHEMUK 2020 brings together an unrivalled blend of topical content & industry personalities.

The BIG Issues

Centre stage will be critical themes such as process innovation, improvement & intensification, sustainability & responsible care, digitisation, new technology, plant & supply chain management, process safety & regulatory landscape, global trade, sector skills, Brexit and more...

Organisations confirmed to speak include; **Chemical Business Association, Chemical Industries Association, Defra, BEIS, Department for International Trade (DIT), BASF, Brenntag, BioVale, The KTN, ABB Energy Industries, The HazChem Network, Accenture, Dupont, Siemens, GAMBICA, Royal Society of Chemistry, Process Intensification Network (PIN), Tank Storage Association, The British Contract Manufacturers and Packers Association (BCMPA), HSE, Environment Agency, Cogent Skills, CATCH, Centre for Process Innovation, Calgavin, Maelstrom Advanced Process Technologies, IChemE Safety Centre, RAS Ltd, National Chemical Emergency Centre (NCEC), Newson Gale, REACHLaw** and many more.

Sector Perspectives

Representing downstream chemical product industries, CHEMUK welcomes senior representatives from **United Kingdom Lubricants Association (UKLA), British Coatings Federation, British Adhesives & Sealants Association (BASA), British Pest Control Association (BPCA), Solvents Industry Association (SIA), Paint Research Association (PRA), Oil & Colour Chemists' Association (OCCA), Composites UK, Confederation of Paper Industries (CPI), The Paper Industry Technical Association (PITA), Aromatherapy Trade Council (ATC)** and others, who will all be providing illuminating sector perspectives and discussing implications for the wider chemical supply chain.

Registration:

Attendees can register for their free badge, providing access to all presentations and exhibition floor. The speedy team registration is also available through the site.

For full and current speaker listing and full exhibitor information, please visit www.chemicalukexpo.com



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Improving process manufacturing through a combined application of digitalization and vital human expertise

Companies across the chemical industry, especially in manufacturing, are realising that they need to kick start their 'digitalisation' journey sooner rather than later, but may not know where to begin. A constant for driving implementation is the fact that IIoT/digitalisation presents companies with huge opportunities to transform their operations, products and services.

A handful of key considerations will support the first, possibly tentative, steps on any digitalisation journey...

Save trees, get ahead

Preserving trees is vital. From their role in creating oxygen to supporting wildlife and providing ingredients for medicines, we need them. Unnecessary business waste can be significantly reduced by transitioning to paperless systems based on edge and cloud technology. Building on this easy win, innovating companies could also look to identify where digitalisation can convert efficiencies and operational differences into tangible competitive advantages.

Scope and build your ecosystem

When companies identify and position themselves within a network of forward-looking partners – who can provide insights, direction and objective assessments of available relevant technologies – an effective gateway is created that can turbo-charge their digitalisation projects.

Blend the wise with the fresh

A mentoring system blends the wisdom of experienced colleagues with the digital intelligence and ability to creatively apply new technologies that are second nature to younger colleagues. By championing this approach, companies can create management systems and process optimisation tools that address specific business challenges in a challenging, increasingly competitive, environment.

Combining emerging IIoT technologies with human expertise allows for improvements in operational performance and productivity in the field of contract manufacturing, for example.

In this case, the process is based upon capturing relevant data from smart sensors to which advanced analytics are applied. Conveniently, this can happen on-site or remotely, via specially developed apps. Positive outcomes are improved productivity and quality

assurance standards, proactive maintenance programmes, better supply chain efficiency, energy savings and greater opportunities for staff development.

The most adaptable facilities are able to handle ultra-small batches through to multi-tonne lots under rigorous control policies, from hazardous chemicals to food ingredients. Whether its single machine processing or bespoke process development, the return is a final product that meets agreed specifications, quicker-to-market new products and more strategic business plans.

Investment in digitalisation plays a huge role in transforming contract manufacturing services, as the enhanced manufacturing capabilities allow for improvements in customer productivity and give a competitive advantage.

For a plant, an effective digital 'toolkit' enriches management information systems to consistently make key data and insights accessible to the right people at the right time. It can evolve into a high-potential service to focus on value-added activities, such as energy savings and cutting waste.

What is clear is that manufacturing companies will struggle to succeed by starting their digital journey alone, but a project can flourish when a company identifies and engages skilled, specialised partners who have the right experience and an ability to understand and support their needs and ambitions.

Almost all data-dependent IIoT applications that are available or about to enter the market promise process improvement, but it is the unique human expertise in chemical processing and contract manufacturing that can be the vital ingredient to even greater success. An open-minded, creative approach and common-sense application of appropriate technologies can positively transform a business. By maximising the capture and integration of rare and hard-to-acquire knowledge into a digital toolkit specifically designed for powder processing manufacturing, the effectiveness of a digital transformation can be immense.

For further information, contact James Moore, Managing Director at Hosokawa Micron Ltd: jmoore@hmluk.hosokawa.com



Ideas are the fuel of innovation: Why so many don't make it

It is almost certain that your first idea for a new product, service or investment will not make it. Studies reveal the devastating attrition rate for new ideas to make an impact in the market with one commercial success for every 3000 raw input ideas.

There are many reasons that ideas fail to make it through to create an impact.

- Introducing new technology is inherently risky.
- The product doesn't fit the market needs or the market is not mature.
- The time is wrong: coming too early or too late.
- Lack of business support at critical phases of development.

If you are involved in strategic innovation, new product development or product launch you will probably have experienced some or all of these challenges. The so-called fuzzy front-end of the innovation process is fraught with uncertainty. Add in the organisational politics, and it's no wonder there are few real successes.

Creating the best chance of success

If we think about what's going on in the organisation in terms of creating the environment for innovation to occur, we can significantly improve the chances of making a positive market impact. In previous articles, I discussed the importance of strategy in setting out the arenas of play. And also of structuring the innovation decision-making machinery.

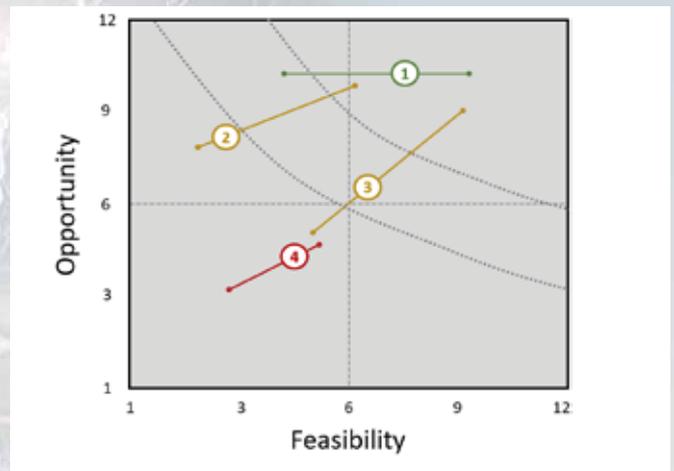
But in very practical terms what if we set up decision-making criteria that are objective, discriminating and transparent?

How to install better decision making

There has been quite a bit of research over the years in decision-making for innovation. In fact, it is likely that most companies will have check-gate questions. Some question sets are better than others but common pitfalls include, insufficient objectivity, mixing up question types, eliminating risk too soon and over financialisation of early-stage ideas.

When designing a decision-making process, consider the job to be done: what decisions are required and for what purpose? Specifically, is it for the screening of early-stage ideas, for ramping up development investment or for selecting startup business ideas?

In selecting objective decision criteria, we can consider two types of question. The first is about the opportunity or size of the prize. They might ask about market size or growth, profitability, customer benefit or brand potential. The



second type of question is about the feasibility of an idea. The questions might consider differentiation, competitive advantage, technical or market capability.

Having selected questions from each category, we may go further and provide guidance about the magnitude of each criterion. Scaling statements must be objectively written and pass the test that it means the same thing to all knowledgeable staff when using the statement. We can then assemble a group of suitably knowledgeable individuals to score ideas and rapidly create a visualisation of ideas in terms of their raw scores and also their ranges of uncertainty. In the graphic, there are four ideas and we can quickly make decisions about where to focus future development. Idea 4 scoring low of both ranges should be dropped. Idea 1 is probably for certain advancement to the next stage of development. Those in the middle ranges should probably be developed at least until the uncertainty is improved.

Better decisions, better business results

Knowing where to deploy your precious resources is a key job for business and innovation leaders. Taking away subjectivity leads to sharper decisions about which ideas to back and which to drop substantially lowering the opportunity cost. And being able to communicate with transparency builds trust in the innovation system.

Want to know more?

We can take a look at your decision-making process and help you to optimise your decision and new innovation, technology and R&D investments. See my previous articles of strategic roadmapping process and the front end innovation system.

Please contact IfM's Industrial Associate in the Northwest, Rob Munro to discuss your technology and innovation management objectives, Email rjm240@cam.ac.uk or call +44(0)7896 128 878



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 funded by our members and owned and supported by the Chemical Industries Association.

Chemicals Northwest members currently serve a wide range of markets, including manufacturers of chemicals, pharmaceuticals, automotive, electronics and construction products. Our membership also has a large proportion of vital service provision to the industry, including legal, engineering, recruitment, laboratories and logistics - to name a few!

Why not join Chemicals Northwest and connect with this dynamic and innovative industry?
Please visit our website at: <https://www.cia.org.uk/chemicalsnorthwest/>

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Improving Safety Performance by Analysis of Cultural Weaknesses

It's generally accepted that having a good safety culture underpins good safety performance, but it's one of those areas where realising this in practice can be challenging. Many companies undertake cultural improvement initiatives, but often the direct, causal linkage to safety performance is missing. Companies should ask themselves, "Do we really see a sustainable improvement in safety performance following a safety culture improvement intervention?"

It's no secret that process safety culture can be hard to measure, because of its nature and the internal effort required. Hence, there are few direct indicators used.

For companies in this position it may be better to look at the problem the other way around, instead of taking periodic culture 'snap-shots' and making changes in the hope that things improve, start with a cultural analysis of your actual safety performance.

Cultural Analysis

In our experience we would expect that an organisation's cultural weaknesses will contribute to the root causes of their safety incidents; but not all companies investigate culture during investigations. Poor culture will also manifest in the pre-cursors to incidents, i.e. those measured by leading Process Safety Performance Indicators (PSPIs). To have sustainable safety performance improvement, organisations must be able to identify cultural weaknesses, learn how to address them and then know how to monitor cultural indicators.

Many companies use the Process Safety Triangle concept to manage safety. The theory states that the number of incidents will be reduced by reducing the number of near misses, and the number of near misses will be reduced by having good process controls in place, and so on. Therefore, it's a reasonable extension to show the Triangle underpinned by culture as it affects the implementation of the Management system.



Figure 1 – Process Safety Triangle

Cultural Cause Analysis (CCA) in Incident Investigations

The driver for investigation of Incidents and Near Misses is to identify improvements to the management system, CCA is an extension to identify benefits which can be gained by understanding which cultural features contributed to the incident.

Some of the common cultural weaknesses include:

- a tolerance of deviations from intended performance,
- a lack of responsiveness to safety concerns,
- not listening to the experts,
- a lack of a sense of vulnerability, or
- a lack of mutual trust with individuals not feeling able to raise concerns.

Performance benefits will arise by treating the cultural issues that contribute most often to incidents.

Performance Assurance Review (PAR)

Alongside CCA in investigations a growing number of businesses are employing Performance Assurance Review (PAR) to extend cultural analysis to all their safety performance indicators, e.g. in the Process Control and Management Systems levels of the Triangle.

This consists of:

- benchmarking the safety performance using incident statistics, audit findings, lagging PSPIs, etc
- evaluating safety culture using; employee surveys, interviews, observations, leading PSPIs to identify cultural weaknesses,
- correlating the above to identify the essential cultural features that have the largest potential benefit on safety performance
- monitoring safety performance and adjusting the cultural interventions accordingly

By evaluating the essential features of a positive safety culture and linking these to observed safety performance at all level of the process safety triangle, prioritized cultural augmentation activities can be undertaken with improvements monitored using performance metrics.

Establishing an effective safety learning culture will help organisations achieve sustainable safety performance and compliance. To find out more please contact us at: enquiriesuk@abs-group.com

**Author: Bradley Eccles, Director of Operations,
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Catalyst to give Isaac Newton space sapling a home!

We are proud to be one of the recipients of one of eight young trees from the pips from Isaac Newton's apple tree that were blasted into space with British ESA Astronaut Tim Peake.

In 2015 apple pips from the iconic Newton tree were taken on the Principia mission by British astronaut Tim Peake to the International Space Station. The pips then spent six months floating in micro gravity as part of the 'Pips in Space' project before returning to Earth in 2016. On their return from space in 2016, the well-travelled pips went to Wakehurst, Kew's wild botanic garden in Sussex and home to the Millennium Seed Bank, where they spent 90 days at 5°C to simulate the winter cold needed to break dormancy. In May 2017, they were warmed to 15°C and the young seedlings started to emerge.

The UK Space Agency, the National Trust and the Royal Botanic Gardens, Kew, worked together on the project.

Catalyst Science Discovery Centre, Widnes was selected to share the story of space travel, Isaac Newton, horticulture and the excitement of science. To celebrate its arrival, Catalyst will be hosting a new exhibition on the story of the space sapling alongside a community engagement project. The tree will be set into the landscape of Spike Island, close to Catalyst, by Halton Borough Council who will care for it thereafter.

Martin Pearson, CEO of Catalyst said "We are delighted to have been awarded one of the eight space saplings in the UK. This is an exciting story to inspire all ages. Combining Newton's gravity to Space Exploration and linking it to our new Planetarium show and Exhibition at Catalyst is very exciting. I hope as many people as possible come to see the Space Sapling and join us at Catalyst in igniting the curiosity of all on the wonder of science."

Catalyst received the tree from Tim Peake at a special ceremony at Woolsthorpe Manor, National Trust attended by Catalyst CEO Martin Pearson, Jade French, Catalyst Community Engagement Coordinator, Mayor of Halton Councillor Margaret Horabin and Andrea Leadsom, Business Secretary and senior representatives from the project.

Speaking at the event, Tim Peake said "These trees are truly unique. They come from the iconic apple tree that inspired Sir Isaac Newton to ponder the forces of gravitation and continues to inspire to this day. My mission to space was named Principia in homage to Newton's defining work that included his world-changing

ideas about gravity. I wanted my Principia mission to inspire others, particularly young people, with the adventure of space and the excitement of science. Now, thanks to the careful nurturing at Kew, the apple pips that flew with me into space have grown into fine young trees which I hope will continue to inspire potential Isaac Newtons."

Andrea Leadsom, Secretary of State for Business, said "Tim Peake's first trip to space became a source of national pride and inspired people across the country, including millions of school children, who were amazed at the wonders of space science and achievements. This mission also contributed to the continued success of our space industry which is a vibrant and successful part of our economy. It is my own personal ambition to ensure the sector has a bright future, with investments that lead to huge improvements in our everyday lives - from tackling climate change to communicating around the world."

Ian Cooper, General Manager for the National Trust, said "Isaac Newton's time back home at Woolsthorpe in his Year of Wonders in 1665/66 transformed scientific thinking, the impact of which is still felt today. As the trees grow and mature at their new homes, the partnerships we've formed in this project will enable us to share Newton's fascinating story with new people, hopefully inspiring curiosity and a passion for scientific endeavour."

The winners who will host Newton's space saplings are:

- Eden Project (Cornwall)
- Jodrell Bank Discovery Centre (Cheshire)
- Brogdale Collections, Home of the National Fruit Collection (Kent)
- Catalyst Science Discovery Centre (Cheshire)
- Royal Parks and National Physical Laboratory (Middx)
- South Derbyshire District Council, Environmental Education Project at Rosliston Forestry Centre (Derbyshire)
- Woolsthorpe Manor (Lincolnshire)
- United Nations Office for Outer Space Affairs (Vienna)



Catalyst CEO Martin Pearson with astronaut Tim Peake

Sustainable future of

The University of Liverpool (UoL) hosted the Sustainable Future of Industrial Energy in conjunction with Clarke Energy and Chemicals North West.

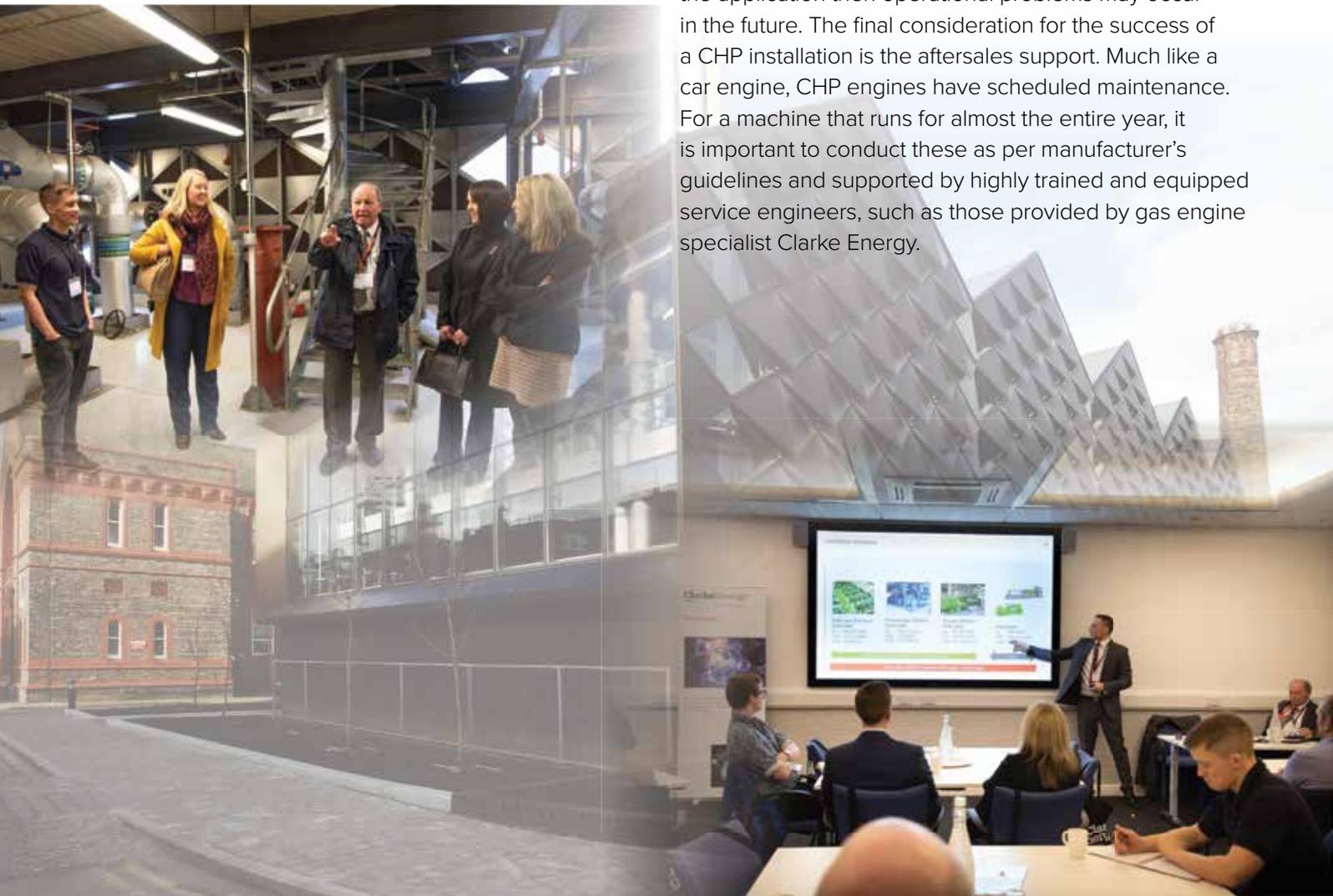
Back in 2009, UoL contracted Clarke Energy to engineer, install and maintain a 3.4MWe Jenbacher J620 gas engine into a bespoke designed energy centre. Since installation, the engine has provided base-load electricity, along with heat for the whole of the campus. Energy bills are drastically reduced, whilst achieving engine availabilities of over 95%.

Industrial high energy consumers are increasingly opting for the deployment of combined heat and power CHP technology. With increasing energy prices resulting from hikes in electricity generation and transmission costs, the United Kingdom is seeing growing numbers of manufacturing and production facilities opting for self-generation of power with the deployment of CHP technology.

CHP plants are captive power plants that generate electricity, typically from gas, and in-turn recover heat from the generators, either as hot water or steam for local use. Generating power close to the site of use not only reduces losses associated with the transmission of electricity, but also improves total fuel efficiency to around 90%.

The key to the success of CHP installations is firstly matching the site's electricity and heating needs to an appropriate generator and heat recovery system. This is done through a detailed technical evaluation of the half hourly energy consumption data, if available. A decision can then be made upon whether hot water or steam would best meet the site's heating requirements. If the site has a cooling requirement it is also possible to fit an absorption chiller to support refrigeration or air conditioning systems.

The next consideration is the machinery and systems that supports the performance of the core generator. If either the generator or 'balance of plant' are inappropriate for the application then operational problems may occur in the future. The final consideration for the success of a CHP installation is the aftersales support. Much like a car engine, CHP engines have scheduled maintenance. For a machine that runs for almost the entire year, it is important to conduct these as per manufacturer's guidelines and supported by highly trained and equipped service engineers, such as those provided by gas engine specialist Clarke Energy.

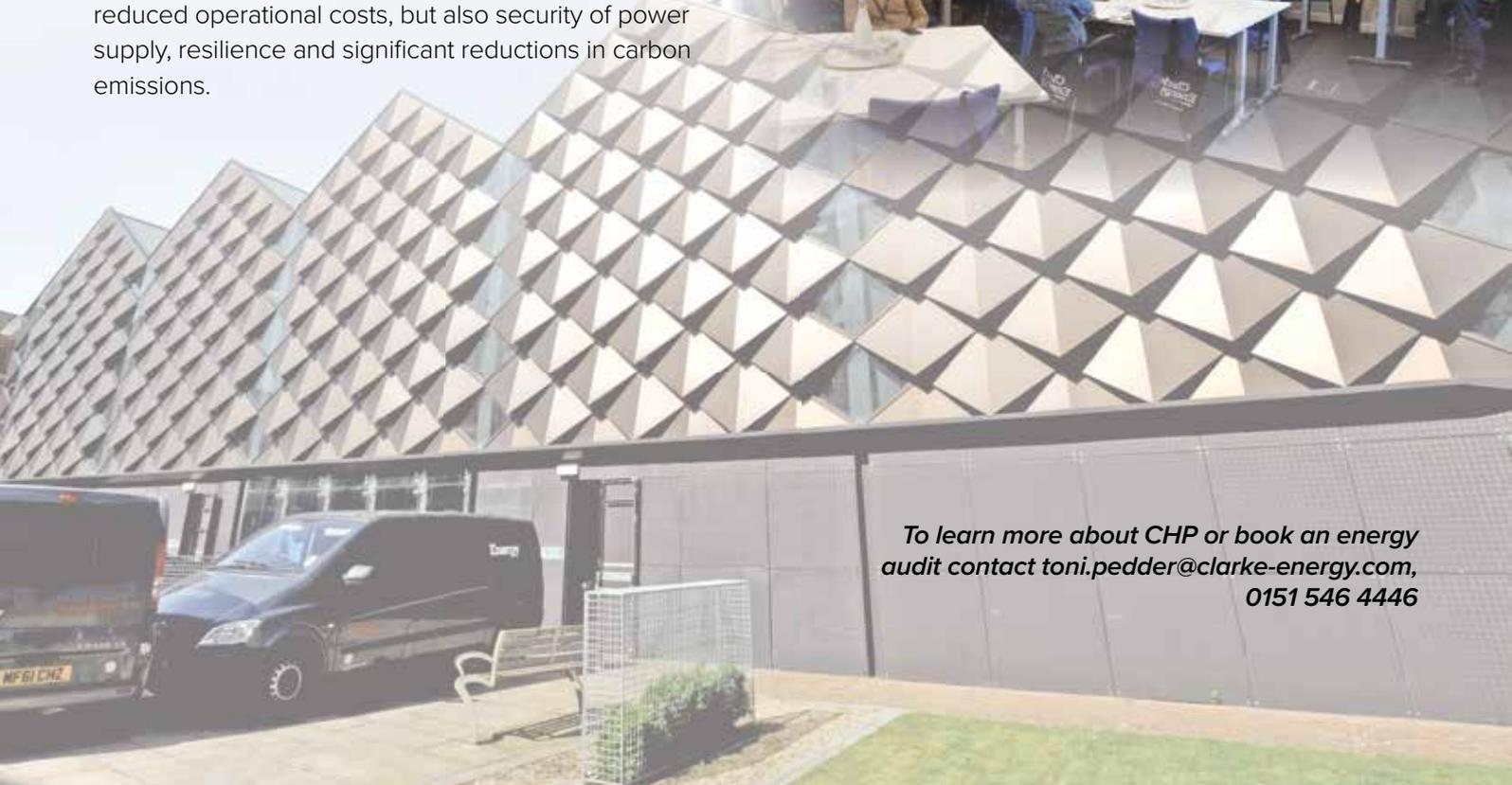


Industrial Energy

Recent years have seen a much wider deployment of CHP technology for a range of new applications. Rising fuel costs and a starker 'spark-spread' – the difference in the price of electricity and gas – along with a focus on reducing carbon emissions are all important drivers. London in particular has seen massive growth in CHP technology over recent years. A range of high-profile buildings now utilise gas engines for cogeneration including the National Gallery, the Shard, and the Natural History Museum. Deploying the technology supports the cost and carbon reduction drive and is also looked on favourably by planning departments from a sustainability perspective.

Datacentres are an emerging market for CHP technology. The focus here is on combined cooling and power rather than combined heat and power. Citibank's datacentre in London is one of the first in the UK to use the technology and can generate 71% of the datacentre's electricity. Finally, with the reduction in price of renewable energy technologies such as wind and solar energy along with storage technologies such as batteries, it is possible to integrate these different elements into a microgrid and make an industrial user self sufficient and minimise carbon emissions.

High energy users can move to an off-grid power generation solution using CHP, possibly integrated with other forms of low carbon power. This provides not only reduced operational costs, but also security of power supply, resilience and significant reductions in carbon emissions.



To learn more about CHP or book an energy audit contact toni.pedder@clarke-energy.com, 0151 546 4446

Axiom prepares to open its doors with a further new office in the North West of England

Hot on the heels of the launch of a new office in the Central Belt of Scotland, the promise of an additional office in the North West has now been realised.

Axiom Engineering Associates' localisation strategy to establish regional presences in key Chemical and Process sector hubs has led to the opening of another new office at one of the UK's leading independently owned business and technical parks.

Based in a central location in Runcorn, The Heath Business and Technical Park is the ideal platform for Axiom to develop and deploy its integrity management strategies to support their clients in the North West.

The facility boasts a central location in Runcorn with excellent accessibility via road, air and rail networks, "state of the art" facilities along with a variety of amenities supporting the needs of the innovative community. The new open-plan office will support the next phase of Axiom's growth in the North West which includes the



creation of a dynamic and experienced workforce to enhance Axiom's existing capabilities.

Kevin Murray, Axiom's Regional Manager for North West England and Scotland said: "Following the comments made at the end of 2019, we have been able to move quickly to secure a new office in the North West. This will enable us to deliver an efficient and responsive service much sought after by clients who require our support in safely operating and extending the life of their ageing assets.

This is an exciting opportunity for the business. Our clients in the North West are keen to embrace the Axiom ethos and track record of excellence. It is our people that make the difference and with plans to recruit further expertise and knowledge this will support the growth of our integrity management services in the area."

The award-winning company which specialises in the provision of UKAS accredited inspection services, backed up by a mechanical and materials asset integrity section, is expected to grow strongly this year.

This move is in response to client demand and part of the overall strategy of the business. With the continued building of long-term partnerships and strategic alliances, Axiom's growth is testament to its capability to deliver effective lifecycle integrity management systems to its clients.

<https://axiomengineeringassociates.com/>

BPE is acquired by On Line Group as part of strategic expansion plans

BPE has been acquired by Lincolnshire-based On Line Group to accelerate its growth and expansion plans.

The acquisition will allow both BPE and On Line Group to grow and expand their combined offering across a wider variety of key market sectors and achieve a greater geographical coverage across the UK from the two organisations operating centres.

BPE will continue to operate as a specialised technology focused chemical and process engineering consultancy, bringing enhanced capability in feasibility studies, concept and front-end designs to the On Line Group.

Noel Quigley, Managing Director at BPE said: "Since our founder and major shareholder, Mike Brown, retired, the board has been looking for a new parent company to support the business with its growth strategy. It was important that any new arrangement would retain BPE's

well-known, trusted brand that has been developed over many years. It was also important to grow the business, creating new opportunities – and the parentage of On Line Group provides the perfect solution. We are excited about the future and we are looking forward to working with all our new colleagues within the On Line Group of companies."

Steve Laird, Group Finance Director, said: "On Line Group has been looking for opportunities to diversify into new sectors and increase our geographical spread across the UK. BPE and On Line Group are a good match, sharing the same core values and providing excellent growth opportunities for both businesses."

Operating in the oil and gas, chemical, nuclear, power, steel and food sectors, it has approximately 600 personnel across the group. The On Line Group is based in Lincolnshire, in the East of England.

**Becky Lewis at Lee Peck Media, T: 023 80 381932,
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Lower insurance premiums and how to get them

Having a business in a higher-risk sector can often mean having significant insurance costs. Business owners may think that insurance premiums are a fixed cost, where they have no opportunity to reduce these costs - this is not necessarily the case. Business owners that can demonstrate 'Positive Risk Features' (see below) can save up to 50% on key insurance premiums.

In many businesses, the insurance renewal process is handled by someone from an administrative department. This process is often carried out in a rush and is only started close to the renewal deadline. This gives little opportunity for developing a competitive tendering process and, because time becomes short, rarely is input sought from the operating departments and the Health & Safety contact.

Renewing insurance in this rushed way, misses the opportunity to

- Review current practices for claims management
- Discuss Health & Safety and claims performance
- Identify alternative brokers and/or insurers to create competition for your insurance premiums
- Provide evidence of the business's 'Positive Risk Features'
- Be offered lower insurance premiums

'Positive Risk Features' include:

- An effective and documented Health & Safety Management System
- An up-to-date Health & Safety Policy
- A Risk Matrix
- Up-to-date Risk Assessments
- A Health & Safety Training programme
- Near miss reporting
- Functioning Health & Safety committees throughout the organisation
- A strong accident reporting and investigation process
- A claims management procedure

Providing insurers with an accurate picture of the organisation's Health & Safety programmes as well as its actual performance is very important.

The use of the Positive Risk Feature approach enables the insurance market to take a clearer view of future risks and potential claims.

These are key factors in assessing the level of insurance premiums.

Organisations that plan for success around insurance renewal time often follow the following timeline to give themselves the best opportunity to access lower insurance premiums. Here is an insurance renewal process that you could adopt:

Three months before the renewal date:

Gather documents for review and incorporate them into a renewal package e.g.

- o All insurance claim reports
- o Claims settlements
- o Accident investigation reports
- o Any statutory insurance reports
- o Provide evidence of the Positive Risk Features

Identify alternative brokers and/or insurers. Choose those with experience of your sector and that offer to provide support to reduce risks further.

Two months before the renewal date:

- o send the renewal package to your chosen brokers and/or insurers
- o ask them for proposals.

One month before renewal date:

- o review these proposals
- o make the selection of your preferred broker and/or insurer.

To conclude, the key steps for businesses that would like to explore the opportunity to reduce their insurance premiums are:

- Begin the renewal process at least 3 months before the renewal date
- Build a renewal package of documents including Positive Risk Features
- Develop a competitive tendering process
- Involve brokers and/or insurers that offer to provide support to reduce risks further

*Jim Smith – ACJ Risk Solutions Limited -
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2M Holdings Ltd expands in cosmetics ingredients in France with Ingretech SAS acquisition

The 2M Holdings group of companies is delighted to announce the addition of Ingretech SAS (Paris, France) to its family of personal care specialty ingredients companies.

Ingretech (www.ingretech.fr) was established 6 years ago by Aline Serre, Aldo Ravanelli, Alfredo Rocchi and Sergio Sala as a specialty ingredient and formulation distribution business supplying French cosmetics producers.

Following the acquisition, Aline Serre will stay as shareholder and Managing Director of Ingretech together with her experienced team. 2M Holdings will provide support for further growth in France via Surfachem, its

Personal Care, HI&I and Pharma company.

"The personal chemistry and synergy in culture with Aline and her team were key to our decision to progress with the acquisition. The same business focus of Ingretech and Surfachem are an added bonus" said Mottie Kessler, Chairman and CEO of 2M Holdings.

Ingretech is the distributor in France of KahlWax, Innospec, Worlée-Chemie, Sandream Impact, Ephylla, Chemyunion, Grace Technology and Heroflon.

"I am delighted to partner with Surfachem and 2M Holdings and can see many opportunities going forward together" said Aline Serre. www.2m-holdings.com

World market leader moves UK Pharma operations to Thornton Science Park

A world market leader, which helps over 100 million people around the world to manage their asthma, has moved its UK Pharma operations to the University of Chester's Thornton Science Park.

Koura is a market leader when it comes to the medical propellants used in asthma inhalers. Sold under the Zephex® brand, its propellants have been used in the production of over 3.5 billion inhalers, helping millions of people worldwide every year. Zephex® products are used in around 75% of the world's metered dose inhalers (MDIs), which are lifesaving and health enhancing devices that deliver a specific amount of medication to the lungs, through an aerosol.

Previously known as Mexichem Fluor, Koura has had office and lab space at Thornton Science Park since 2018. Starting with just 10 staff based at Thornton, the company has expanded its footprint on site, having taken up additional office space in Thornton's Building 49, which has Enterprise Zone Status as part of the Cheshire Science Corridor and added more people to its growing Pharma team.

Paul Vernon, Senior Executive Director of Commercial Operations at the University of Chester, and Chief Executive of Thornton Research Properties Limited, said: "We are delighted that Koura has chosen to base its UK Pharma operations at Thornton Science Park. Thornton is already recognised as an international centre of industry and academic expertise - already home to 37 businesses, collectively employing 600 people. The fact that Koura has expanded so quickly here, since having a base at

Thornton last year, demonstrates their support of our model. The company also has plans to engage further with our Faculty of Science and Engineering. These are very exciting times and we look forward to seeing the results that this partnership will bring."

Simon Gardner, Pharma General Manager from Koura added: "Moving Koura's UK Pharma operations to Thornton Science Park signals a positive step forward and Koura's commitment to bringing Zephex®152a to market, delivering a brand new, environmentally friendly technology that dramatically improves environmental impact and preserves patient choice. Our new offices have the capacity for over 45, highly skilled project team members and support staff and we look forward to expanding our team in the coming months."



Professor Tim Wheeler, Vice-Chancellor of the University of Chester, giving a welcome speech to new Koura staff with Simon Gardner (far left) General Manager, United Kingdom, for Koura.

Jayne Dodgson, Director of Corporate Communications,
+44 (0)1244 511450, 07841 250221 - www.chester.ac.uk

BPE appoints Business Development Manager

Process engineering company, BPE is pleased to confirm the appointment of Mark Rowland as Business Development Manager.

Mark has an impressive background in business development spanning 30 years. During this time he has promoted a full range of process engineering services from consultancy through process systems design, including process safety and regulatory compliance support.

Most recently, Mark was Business Development Manager for Exyte, a large German based international multi-disciplined design and construction company. He has also held a number of previous roles in the fields of Petrochemical, Food, Drink, Pharmaceuticals, Biotechnology, Speciality Chemicals.

Mark will be based at BPE's office in Colden Common, near Winchester, but he will be operating throughout the UK and Ireland. He will be responsible for managing new and existing relationships with businesses in the life sciences, speciality chemicals and biotech sectors.

He said: "I'm thrilled to join the BPE team. It has a strong reputation within the industry, particularly for its process design expertise and process safety knowledge, and I am looking forward to bringing my experience to the team."

Simon Wheeler, Business Development Director at BPE, added: "Mark's expertise really is unrivalled and will be of huge benefit to our business. We look forward to working with him as we continue to expand. I wish him a successful and productive career with us here at BPE."

Becky Lewis at Lee Peck Media, T: 023 80 381932,
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MCE Group

With 30 years of experience, MCE understands the importance of valve reliability during manufacturing processes. Whether it be an urgent day to day breakdown or a planned outage period, we can assist with maintenance or complete overhaul of your control, relief and isolation valves and actuation. This can be on-site, including in-situ relief valve tests, or in our state-of-the-art workshops. We also appreciate that valves can fail at any-time, so we are available for emergency call out 24/7/365

Our in-house designed and bespoke Valve Management Database™ aids our completion of valve maintenance in a timely manner, also offering our customers the ability to track the exact status of their valves in real time from their own office, giving them complete confidence in our service capabilities.

Many companies can lose history of

previous valve maintenance and have little facility in their ERP systems to track valves, but the information stored in our database allows customers to search their own maintenance history. This also assists with future planning and enables customers to conduct searches by component, spare part, date, serial number etc. Customers are also able to download and print current and historic test reports.

We aim to be THE go-to valve maintenance company in the North West and we have a solid base to build on.

In addition to valve servicing, MCE assembles, stocks and supplies a range of severe service, ZERO-LEAKAGE, high-performance isolation valves manufactured by our parent company, ValvTechnologies. based in Houston, Texas. These valves are particularly suitable for steam applications and chemical processing and are proven to save site energy and can be delivered in days.



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ABS Consulting Ltd

ABS Consulting Ltd (part of the ABS Group) provides a range of technical solutions to support safe, reliable and high-performance assets and operations. We are recognised global leaders in process safety management training, auditing and consulting resources, including incident investigation and root cause analysis. Additionally, there are many more features that define the company's offering in safety, risk and compliance;

- SAFETY STUDIES, TRAINING, CONSULTANCY & AUDITS
- Hazard identification & evaluation, Risk management, RCA, Incident investigation, QRA.
- OBRA, Fire & explosion modelling and mitigation, Blast resistance design.
- MI & Damage mechanism review.
- Integrated EHS systems, Compliance, PSM indicators.
- Safety culture & Human factors assessments.

ABS Group has developed a range of software applications: Hazard/review LEADER™ – Integrated HAZOP, What-if analysis, FMEA and LOPA.

RootCause LEADER™ is a tool that analyses incidents, near misses and breakdowns. THESIS™ BowTie risk management software has integrated LOPA.

In addition to the above support, the company designs and delivers training courses on both a public and in-house basis. Attending professionals receive high-quality training using proven techniques aimed at helping them implement programmes in safety, security, risk, reliability, quality and the environment.

Sharing of best practices and case studies can be accessed through the ABS Group web-based 'Knowledge Centre' – **webinars, project profiles and insights.**



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Wider implications of the Heathrow 3rd runway refusal

In late February the Court of Appeal ruled against plans for a third runway at Heathrow on climate change grounds.

More specifically, it was held that ministers had failed to take into account the 2016 Paris Agreement which set goals on limiting global temperatures and dealing with the impacts of climate change. This is the first judgement, anywhere in the world, to uphold the agreement as having status in a local jurisdiction; previously there was uncertainty as to whether its goals are binding on the countries that have ratified it or merely aspirational. For that reason, the Court of Appeal's decision is expected to be influential far beyond these shores.

To be precise, the government had not taken the Paris Agreement into account when drawing up a 2018 national policy statement on airports in the South East, and consequently that policy statement had not been lawfully produced. No consideration had been given to assessing how the additional carbon emissions associated with a third runway could be compatible with the UK's Paris commitments. The government has said that it will not appeal further to the Supreme Court (although Heathrow Airport will do so), meaning that it

now has two options: either abandon the expansion plans or draw up a new, Paris-friendly policy statement and demonstrate that a third runway will be consistent with it.

What are the implications for more modest development proposals?

The court's message is that the Paris targets cannot be ignored by the government when producing policy statements, and presumably there will need to be a major revision exercise to avoid judicial reviews on similar grounds across the whole range of development types. But in reality climate change considerations are only likely to feature significantly in decision-making where the proposed development will have a substantial carbon footprint, either directly or indirectly (eg through increased traffic flows). Nevertheless, now that a national climate emergency has been declared and climate change enjoys a high public profile, it would be wise to ensure that these issues are addressed at an appropriate level of detail in every industrial planning application.

For further information please contact:
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Symmetry Law

Market leading experts with over 25 years experience in environmental law.

Our services also include regulatory, nuclear, commercial, construction, tax & green incentives and litigation.

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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/>

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.

BakerCorp UK Ltd

Provision of rental products for transfer, storage and treatment of liquids. Specialising in liquid management solutions for demanding operations, with focus on the tank, pump and filtration product lines. From a single-product storage project to setting up an integrated multi-product solution. Initial chemical compatibility checks, 'job walks', CAD drawings and rigorous equipment maintenance schedules.

Brenntag UK & Ireland

Connects chemical manufacturers and chemical users in a value-adding partnership through tailor-made distribution solutions. Offers specific application technology, extensive technical support and value-added services (i.e. just-in-time delivery, product mixing, formulation, repackaging, inventory management and drum return handling). High safety standards and strives to make served industries sustainable.

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.

Hosokawa Micron Ltd

Integrated powder processing technologies including: size reduction, air classification, mixing, drying, containment equipment such as glove boxes 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.

Innovative Packaging Solutions Ltd

A top tier COMAH operation offering many handling services: re-packaging of any class liquid chemicals from bulk isotankers, road tankers, IBCs and drums. Decanting, dosing and sampling. Packaging: HT pallets, strapping and shrink wrapping. Labelling of receipts and despatches. Storage services including: inside, outside or temperature controlled.

Kanon Liquid Handling Ltd

Design and manufacture of drum, IBC and container filling systems ranging from fully automated robotic systems to simple manual machines. Full range of marine, road and rail tanker loading/unloading and safe access equipment. Distributor for Mann-Tek couplings, with repair facility and a 'return to base' option.

Education, training & skills

All About STEM

Lots of different projects to bring exciting Science, Technology, Engineering and Mathematics to schools across the region, linking them with business and industry expert volunteers inspiring the next generation of STEM specialists. Building and maintaining relationships with our schools, businesses, industry, colleges and universities, so that we can strategically match-make opportunities with need.

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.

EngineeringUK

Not-for-profit organisation promoting the contribution made by engineers to society. We partner business and industry, government and the wider science & engineering community, producing evidence of the state of engineering. Sharing of knowledge and inspiring young people to choose a career in engineering.

Manchester Metropolitan University

Degree apprenticeships, consultation services, collaborative and contract research facilities, and students seeking placement opportunities. The Department of Natural Sciences trains undergraduate and postgraduate students in chemistry, pharmaceutical chemistry, medicinal and biological chemistry, biology and environmental science. New MSc in Advanced Materials starting in September 2020.

SEERIH

The Science & Engineering Education Research and Innovation Hub positively influences the

experience of young people in science and engineering. Expertise in curriculum and teacher development, applied research and creation of innovative projects related to primary science and associated STEM disciplines. Inspiring excellence in teaching and learning in science education.

The Outward Bound Trust

An educational charity that uses the outdoors to help develop young people. Experts in the development of early talent and specialising in providing experiential learning and development programmes for apprentices and graduates. Identification, development and change of people behaviours in line with organisational needs.

TTE Training Ltd

Engineering training and apprenticeships focused on whole person development and bridging the sector's skills gap. The learning environment will be one which is welcoming, safe and inspiring, appropriate to the subjects and responsive to the needs of the learner.

University of Chester

Faculty of Science & Engineering offers new degrees in chemical engineering, electronic & electrical engineering, mechanical engineering, natural sciences alongside established degrees in mathematics and computer science. Close links to local chemical companies with student placements and collaborative research projects.

Wirral Met College

Provision of education and training, supporting innovation and development. The College is pioneering SIP traineeship programmes with local employers, preparing young people for science apprenticeships. New STEM Centre opened in 2016.

Engineering products & services

Altrad Services

An international leader in the provision of critical industrial services principally to the energy, infrastructure and natural resources sectors. The multi-disciplinary service includes access systems, insulation, specialist coatings, passive fire protection, engineering services, refractory linings, environmental services, oil and gas storage tanks and heat exchanger replacement and refurbishment.

Chem Resist Group Ltd

Design, manufacture and installation of corrosion resistant process plant. A wide portfolio of thermoplastic process plant, an extensive range of pumps and ancillaries and complete pipework installations, upgrades and repairs. Aggressive and corrosive applications for pumps (1m³/hr to 1000m³/hr, heads to 100m) valves and level controls.

Derwent James Ltd

Providing outstanding safety equipment, consultancy and expertise for your company. Exclusive UK agents for Dopak chemical sampling systems. Over two decades experience in the design and supply of safe manual sampling systems for chemical liquids and gases. Consultancy and supply of mechanical interlocks, lockout tagout and portable valve drives.

Know your supply chains

DHD Cooling Limited

Design, installation and maintenance solutions for industrial cooling. Our service extends to cooling system inspection, testing, service, maintenance and new equipment capability. Regulatory and reliability assessments, thermal performance improvements, turnkey projects and carbon footprint reduction.

Glacier Energy Services

Onsite Machining; design and manufacture of equipment for precision pipe cutting and onsite machining. Heat Exchanger design, manufacture, repair and refurbishment. Welding. NDT services performed by highly qualified technicians. Provision of turnkey solutions in respect of surface and subsea production equipment. Great customer value, highest standard of service and best-in-class HSEQ performance.

HTS Engineering Group Ltd

Process safety and safety instrumented systems, delivered with a high level of engineering and expertise with cost efficiency. Four key engineering services that can be tailored individually or as one complete solution: process control & software engineering, engineering & design, site installation and inspection services.

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.

Lokring Northern (UK)

Special mechanical fitting system that produces a permanent weld equivalent pipe connection, eliminating the need for hot work, NDT and associated health and safety issues. Lokring fittings are code qualified to ASME B31.1, B31.3 and other industry standards. A proven cost saver compared to traditional welding and fabrication methods.

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.

MCE Group

Offering valve service and overhaul in our state-of-the-art service workshops, or on site, using OEM parts, from single valves to complete outages. European distributor for ValvTechnologies, providing severe service, zero-leakage isolation valve solutions, setting the standard for the next generation of valves for the chemical industry.

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 from stock. Centrifuges, dryers, evaporators, filters, heat exchangers, mills, mixers, reactors, separators, tanks.

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.

Swagelok Manchester

Fluid system solutions, products, training and services. Supply of over 7000 fluid system components including; fittings, hoses, tubing, regulators, equipment servicing and custom fabricated solutions. Provision of practical information, know-how, tools and speciality services needed to purchase, manage and apply them successfully.

Yokogawa

Fluid system solutions, products, training and Yokogawa is a leading provider of field instrumentation, safety systems, industrial automation and digital transformation solutions. IOT, 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

Axiom Engineering Associates Ltd

An award-winning company specialising in the provision of UKAS accredited inspection services, backed up by a mechanical and materials asset integrity section. Acting as the design and inspection authority to many blue-chip companies, working across a broad range of process sectors such as: chemicals, petrochemicals, bulk storage, power and pharmaceuticals.

Clarke Energy

Specialists in the engineering, installation and maintenance of reciprocating engine-based Combined Heat & Power (CHP) plants. Offering ranges from supply of an engine through to turnkey installation of a multi-engine power plant. Our facilities deliver fuel efficiency, dramatically lower energy costs and help reduce carbon emissions. Carbon dioxide can also be recovered.

Comeca Intelligent Motor Control Centres

Comeca UK formerly GEC, Alstom, Areva T&D the exclusive provider of Gemstart and manufacturer of Galaxis Motor Control Centres. Opening of two new manufacturing units in 2018 further enhances our ability to provide full Service and Support for our UK and Northern Europe Install base.

E.ON Energy Solutions

As experts in Combined Heat & Power (CHP) we take the time to understand your core business drivers to shape an economically optimised energy solution that supports your long-term strategy. We're at the forefront of energy markets, driving change in response to global megatrends, including digitalisation, decentralisation of generation, the de-carbonisation of heat and power, and Industry 4.0.

Fichtner Consulting Engineers Ltd

International engineering and project management. Provision of mechanical, electrical, process and chemical engineering design services. Strong focus on thermal combustion and full range of processes associated with power applications. Recent growth in renewable energy sources such as: solar, anaerobic digestion and onshore wind projects.

Graham Hart (Process Technology) Ltd

Delivering high integrity heat transfer equipment for over 45 years. The company has a strong emphasis on Chemical/Process & Mechanical Engineering backed up by an advanced manufacturing facility.

Otto Simon Ltd

Diverse engineering consultancy and project delivery organisation. Initial consultations, technical and commercial due diligence and front end design and definition. Feasibility studies through design, supply, erection, and commissioning services using in-house and licensed technology. Services for complete plants or upgrades. Procurement, construction management, start-up and operation & maintenance expertise.

PM PROJEN

A multi-disciplined engineering, design and project management business working across a range of market sectors for a diverse mix of clients from SMEs to multinational blue-chip companies. Part of PM Group, a 2,200 strong, employee owned company operating across Europe, Asia and the USA.

WorleyParsons Resources & Energy

A professional services company delivering, concept, prefeasibility and feasibility studies, FEED and Detail Engineering, Procurement and Construction. We also offer a wide range of advisory services. We support the chemicals, hydrocarbons, infrastructure and minerals & metals sectors over their full lifecycle, providing end to end services.

Engineering, IT & process consultants

ABB Ltd

ABB delivers high value consulting and lifecycle services to help companies in the global high hazard industries achieve operational excellence. Offering expertise in: inspection, integrity management, maintenance and reliability, obsolescence management, process safety, project services, late life and demolition, technical engineering, software and technical training. Benefitting customers by reducing risk, optimising cost and improving efficiency.

BPE Design and Support Ltd

Progressive and innovative process engineering consultancy. Extensive process development and scale-up experience and process modelling and simulation is a core expertise. Early stage concept and feasibility studies as well as subsequent design, commissioning and qualification stages. Independent HAZOP chairing, ATEX/DSEAR assessments and SIL/LOPA studies.

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.

HFL Consulting Ltd

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.

Intersolia

Intersolia provides large organisations and small firms with a web-based platform designed to enable them to achieve COSHH compliance, and most importantly providing those who use chemicals as part of their everyday workplace activities with the critical safety information needed to safeguard their health and in doing so, protecting the business.

Peak42 Ltd

Process control, industrial automation systems and manufacturing analytics. A unique combination of automation projects, consultancy, and performance improvement services delivered by experienced teams. FEED, process control projects, legacy asset replacements, control room and operational technology, modern manufacturing analytics solutions.

Siemens Digital Factory & Process Industries and Drives

Productivity and efficiency requirements continuously increase in the field of process automation. A comprehensive range of process automation and Drives products as well as an award-winning range of training and support services.

Environment, health & safety risk management

AB Risk

Human factors and process safety risk consultancy for process industries. Expertise includes safety critical task analysis, staffing assessments, alarm management, control room design, human factors engineering in capital projects, safety reports. Engineer with extensive human factors experience taking a systems view, assessing complex situations and developing practical and effective solutions.

ABS Consulting

A global process safety consultancy and training services provider with regional headquarters in Warrington, UK. Our expertise in data-driven risk and reliability includes a range of capabilities: root cause analysis, incident investigation, organisational culture evaluation, risk management, process hazard analysis, bow-tie and data science techniques. Our approved process safety leadership training courses and proficiencies also include building risk assessments, HAZOP analysis, compliance auditing, asset integrity management competency assurance and management systems certification services.

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 is 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.

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.

RPS Group

Provision of specialist consultancy to help those with responsibility for health and safety achieve compliance. With particular expertise in the chemicals sector, we provide support from plant development through to operation. Core services include: ATEX/DSEAR, asbestos, BowTie analysis, CDM, COMAH support, fire safety engineering, functional safety, hazard identification, Legionella, occupation health and risk assessment/analysis.

Facilities, finance and other business services

ChemQuest Ltd

Sourcing and procurement solutions for research and development. Expertise in biochemical, chemical, nanotechnology, cell cultures, equipment, consumables and sundries. Streamlining and simplification of importing and purchasing processes.

Department for International Trade – Northwest

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.

Falck Fire Services UK

A leading, global and dedicated emergency services provider and fire-fighting specialist to high risk industries. Tailored outsourcing contracts and a high quality integrated fire protection system. Incident fire training courses for emergency response teams, including practical scenarios. Consulting services specialising in fire and explosion hazard management.

Grant Thornton UK LLP

One of the world's leading organisations of independent advisory, tax and audit firms. We help dynamic organisations unlock their potential for growth by providing meaningful, forward looking advice. Provision of assurance, tax and advisory services. A dedicated Innovation practice that has an enviable track record of working with successful and dynamic companies to realise their ambitions for growth.

Halton Borough Council

World renowned research facilities such as Sci-Tech Daresbury and The Heath alongside many companies at the cutting edge of science, technology and advanced manufacturing. We oversee capacity in terms of land, buildings, people and business support creating a world class location.

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.

TW Languages Ltd

Provision of a professional and reliable multi-lingual translation service delivering high quality translations. We specialise in business, technical and scientific translations into 250+ language combinations. We provide certified translations for legal purposes. We are full members of the ATC & EUATC and ISO 17100 Translation Services certified.

Laboratory products, testing and services

Chilworth Technology Ltd

Process safety testing services aimed at helping companies avoid major incidents such as fire, explosion or loss of containment. Combining process safety engineering and management expertise with the use of test data allows us to help clients achieve the most effective and practical approaches to safe and efficient processes.

Envigo

Envigo provides essential research services, models and products for biopharmaceutical, crop protection, and chemical companies as well as universities, governments, and other research organizations. Our business is founded on a dedication to customer service and the expertise and experience of our 3,800 people.

Kindlow Safety Services

Provision of process safety testing and consultancy. Understanding of needs to control hazards such as dust explosions, thermal decomposition and runaway chemical reactions. Fully equipped laboratory and experienced team help achieve your safe operating conditions. Other services include: HAZOP, aerosol safety, REACH testing and process safety training.

Labtex Ltd

Suppliers of leading laboratory products and process scale-up equipment. The list includes: HUBER liquid temperature control systems, DIEHM glass reactors to 100 l, PREMEX and AMAR high pressure autoclaves, POPE wiped film or short path evaporation and distillation, Nutsche filter dryers and many more.

Smithers Viscient

Environmental testing and regulatory services, carrying out environmental, consumer safety contract research and regulatory services. Plant metabolism, aquatic ecotoxicology, avian toxicology, environmental fate, honeybee and pollinator testing, endocrine disruptor testing, residue, analytical and product chemistry.

XCellR8 Ltd

A world leader in animal-free testing. Our GLP accredited laboratory provides ground-breaking in vitro safety tests for the chemical

Know your supply chains

and personal care industries. We are passionate about delivering testing strategies that are both scientifically advanced and ethically sound. Our award-winning work is recognised at a regulatory level by the OECD and ECHA.

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.

E3 employment Law LLP

Specialising in employment law. The resolution of the full range of employment law and industrial relations issues to suit individual businesses. Delivering employment law advice which provides outstanding commercial value.

Marks & Clerk LLP

Intellectual property services, advising start-ups, SMEs and multi-nationals with large global IP portfolios. Comprehensive range of IP services covering patents, trade marks, designs and copyright. Obtaining protection worldwide, portfolio management, strategic and commercial advice, licensing, enforcement, due diligence, valuations and litigation.

RW Legal Ltd

Provision of pragmatic legal advice to companies in the chemical sector. Particular expertise in drafting and negotiating commercial contracts. Managing legal risk through early involvement to save time and resources in the long run. Competitive rates and flexible fees without sacrificing quality.

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.

Symmetry Law

Specialist law practice structured to provide "partner" level experts at "junior" level prices, with a focus on the 'high consequence' end of the spectrum. Legal services include: environmental, safety, regulatory, contracts, tax, construction, green incentives, litigation.

Withers & Rogers LLP

A leading UK and European intellectual property law firm with five offices including London and Munich. We offer a range of IP services including obtaining UK, European and worldwide patent or trade mark protection, the handling of contentious matters, advice surrounding licensing arrangements and issues including validity of patents and "freedom to operate".

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.

REACH and chemicals services

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.

Stewardship Solutions Ltd

Provision of chemicals regulatory services to organisations across many industry sectors and throughout the world. REACH and CLP compliance is a primary focus, and REACH registrations programmes are a core strength. The company has achieved significant savings in the costs of REACH compliance on behalf of many of its SME clients. Stewardship Solutions is a REACHReady-approved service provider.

The ACTA Group

Assisting companies with complex compliance issues under multiple regulatory schemes, including N American, EU, S American, Asian and Pacific rim regulatory programmes. Expertise in product approvals, product review and REACH compliance. Provision of REACH registration dossier submission, lead and joint registrations.

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.

Airswift

Provision of international workforce solutions to the energy, process and infrastructure industries. Placing candidates into their ideal role; rehiring a contractor from one project to the next; mobilising people around the world quicker; searching and selecting a senior executive to fill a key position; or implementing an agile workforce strategy.

Millbank

With over 30 years' experience providing recruitment solutions to major clients in the chemical sector, Millbank has an extensive database of experienced candidates and contractors ready to join projects across the region. A true recruitment partner, Millbank offers services ranging from contract and permanent placements through to fully managed services.

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.

Science Recruitment Group

Experts in the recruitment of scientific, regulatory, quality, engineering and technical professional across all areas of the industry. Support in recruiting temporary, contract or permanent staff for your team.

TransitionPlus Ltd

Executive search for science based organisations, talent development, outplacement and career transition support. Experienced chair, NED, coach and business development consultancy. The "Plus" is to ensure that considerable attention and investment is given both before and after the recruitment to ensure that company culture and "fit" are clearly understood.

Apprentice and graduate wellbeing... Is talking the answer?!

When it comes to wellbeing, a great positive change in recent years has been encouraging people (especially young people) to talk about their feelings. For many people this is indeed useful and it's something that I totally support. However, for about 1 in 6 people, chatting about their emotions might not be the best option.

Everyone is different

For some people, social interactions are challenging and stressful. This could be due to shyness, speech and language difficulties, special needs or autism. In these cases, pushing them to discuss feelings will be stressful, unsuccessful, and might make them feel more isolated. In other situations, it might just be the wrong time, or you might not be the person they want to have that conversation with. At its heart, this is about recognising that everyone is different. Recognising this can help us shift to more effective strategies.

Notice what's happening

Even taking this into account, as chatting works for most people, it makes sense to begin with this – but really notice the person's response. Body language, tone and type of answers give big clues about how the person is responding. If someone is becoming 'closed up' by becoming stiffer, crossing arms, avoiding eye contact and looking flushed this is a big warning. Similarly, if someone is uncommunicative, or gives very short, non-committal answers in an unfriendly tone, this is clearly a red flag! If you spot these signals it is far better to 'cut your losses' and accept that there won't be any sharing at this time (even if it would be good if it did happen).

Adapt your style

But don't give up! Try and change the type of conversation. It is often safest to shift to a safe and relatively bland subject like the weather, food or sport. Here at Outward Bound we use our activities as a conversation starter, these big, shared experiences provide a communal experience which people are normally happy to talk about. If this type of chat is going well, it might be worth asking about 'favourite things', as most people are happy to talk about things they like. With this type of conversation, you are consciously trying to shift someone's emotional state by encouraging them to think about things which make them feel more positive. Throughout this, be aware that some people find all

conversations stressful and because of this it is worth having other ideas.

How to support wellbeing without talking

- Spend some time with the person. This is one of the most effective (and simple) strategies. It can be especially valuable the person is going into a potentially stressful social situation, eg being introduced to new people or attending a group meeting. Don't underestimate the value of simply having someone literally alongside you when you are anxious.
- Ask them to help you with a small task. It sounds counter-intuitive – but giving a stressed person a job to do (like handing out books or showing someone to their seat) can help them as it gives them something clear, contained and attainable to focus on. For some people, lack of structure can be highly stressful so creating some organisation for them can be calming.
- Do tiny nice things. Making a cup of tea, offering a seat or sharing a chocolate bar can all have a value far beyond their apparent weight. By focusing on body language you can work out if these actions are having a positive effect.

Your checklist

This is a complex area. Encouraging people to chat about their emotions is always a good first step. But always do this with empathy and awareness. Check how the person is responding to ensure that you're not making a stressed person even more stressed. If you are, it's important to have other strategies you can use – offer your presence rather than your conversation or offer some structure in unfamiliar situations. Often it is as simple as being nice. Gestures and actions really do sometimes speak louder than words.

Last, but by no means least, be available. Make sure the young person knows that you are happy to chat about emotions, or anything else, at any point in the future.



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