I am delighted to introduce this Directory of UK nuclear decommissioning expertise.

The UK nuclear industry is one of the most established and advanced in the world. By virtue of being one of the earliest countries to develop this technology, the UK has acquired a wealth of experience and is an international leader in nuclear decommissioning, radioactive waste management and site remediation. The UK employs 60,000 highly trained workers, providing a wide variety of nuclear skills ranging from plant operations, specialist engineering disciplines and expert knowledge of regulatory requirements, through to project management, scientific and cutting edge research programmes, and first class safety and systems expertise.

The Nuclear Decommissioning Authority (NDA) is the strategic authority that now owns the 19 sites and associated civil nuclear liabilities and assets of the UK public sector. It is currently managing an annual £3bn programme of work to operate, decommission and remediate these sites. Site facilities range from nuclear reactors, large fuel processing and reprocessing plants, to waste retrieval / processing plants, research facilities and radioactive waste disposal facilities. Baseline decommissioning plans have been established for all of these sites. In this co-ordinated approach, innovation in both technical and organisational matters is rewarded, and experience shared throughout the industry. This is why the UK has become home to many of the world’s most prominent nuclear companies, with a developed, mature and flexible supply chain.

Many valuable lessons have been learned over the last 20 years. These clean-up programmes have provided UK companies with experience in dealing with all aspects of the safe and efficient clean-up of nuclear facilities. No single model or approach has been applied, and instead, different commercial models and structures have evolved through refinement over time. We are still learning. There are many areas that can be highlighted as success stories, and equally many other examples that have been extremely challenging. Decommissioning and clean-up of the UK’s first generation of Magnox power stations (and associated plant such as shielded caves, cells and spent fuel ponds) is well advanced. Additional programmes have seen the clean-out, decontamination, dismantling and demolition of higher hazard nuclear facilities at sites such as Sellafield, Dounreay, Harwell, Winfrith and Capenhurst.

I am glad to see so many UK companies represented in this catalogue. I hope it will be a useful publication and help identify areas where the UK can support Japan in the challenges posed by nuclear decommissioning.

Lord Green
Minister of State for Trade and Investment
The Nuclear Industry Association (NIA) is the trade association and representative voice of Britain’s civil nuclear industry. It represents more than 260 companies including the operators and vendors of nuclear power stations, those engaged in decommissioning, waste management, nuclear liabilities management and all aspects of the nuclear fuel cycle, nuclear equipment suppliers, engineering and construction firms, nuclear research organisations, and legal, financial and consultancy companies.

The NIA’s key objectives are to improve the commercial performance of the UK nuclear industry by assisting and supporting member companies to develop their businesses in the UK and overseas, and to improve the understanding of nuclear energy and the climate of political and public opinion in which the industry works and develops.

The Nuclear Industry Association supports a balanced low-carbon energy future for the UK including renewables, clean coal and gas - with nuclear at its low-carbon centre.

As home to the world’s first civil nuclear power station, West Cumbria has developed skills and expertise over more than 50 years which can not only aid Britain’s nuclear new build and decommissioning agenda but also assist other countries across the world with their nuclear plans.

Britain’s Energy Coast was established in 2009 with the mission of helping West Cumbria to strengthen its position at the forefront of Britain’s nuclear industry while at the same time diversify into other Clean Technologies such as wet renewable, biomass, wind and solar.

Working closely with local businesses in the energy supply chain and beyond, and the academic sector we deliver a wide range of services (detailed below) to businesses in West Cumbria designed to help them grow and prosper, while at the same time promoting West Cumbria’s attributes to new export markets and to potential inward investors across the world.

We aim to create a more dynamic, innovative and entrepreneurial environment which helps to stimulate new wealth, investment and jobs that directly benefit the West Cumbrian community and aids Britain’s response to the pressing challenges of climate change and energy security.

Our strategy for growth and diversification, the West Cumbria Economic Blueprint, is available to view at www.britainsenergycoast.co.uk/blueprint

Business Support: We provide a wide range of programmes and finance packages which span business start-ups to bespoke and specialist support for SME and large multinational companies operating in West Cumbria. We also provide support for businesses looking to develop new products and energy innovations.

Inward Investment: We provide a comprehensive package for inward investors ranging from financial support and assistance with integration into local supply chains to an in-depth sites and premises location service and tours of the local area to view facilities and potential partner companies. We also undertake activities to encourage West Cumbrian companies to seek new export opportunities, such as working with UKTI on the trade delegation to Korea and Japan (November 2012).

Commercial Property: We own and operate Westlakes Science & Technology Park, which is home to 70 diverse companies providing services to the nuclear and energy sectors and has a growing reputation for R&D (www.westlakessciencepark.co.uk). We also have an extensive portfolio of managed workspace in urban and rural locations in the area.

Funding for regeneration developments: Our recent projects include a new container handling facility at the Port of Workington, a state-of-the-art centre for developing traditional and new high-tech construction skills, and an office block for Sellafield workers in Whitehaven Town centre.

Britain’s Energy Coast has experience of working successfully with a range of partners at home and overseas.

These include our funders the Nuclear Decommissioning Authority, Nuclear Management Partners and their component companies URS, Areva and Amec; Sellafield Limited and members of their global supply chain, which employ around 2,000 people in West Cumbria. Other companies include Tata Steel, REACT Engineering, Westlakes Engineering, James Fisher Nuclear, PacTeC, Par Systems, Forth Engineering, National Nuclear Laboratory, Dalton Institute and local companies with a growing global reach such as TIS Cumbria Ltd and Safety Critical Analysis Ltd.

We have also developed strong relationships with the UK Government, in particular the Department of Energy & Climate Change and the Department for Business, Innovation & Skills. Both departments gave their full endorsement to the West Cumbria Economic Blueprint, expressing the national importance of our work and the work of those West Cumbrian businesses that will help to deliver the strategy.

URL: http://www.niauk.org
Address: Carlton House, 22a St James’s Square, London SW1Y 4JH
Contact: Peter Haslam, Public Policy Adviser
Phone: +44(0)20 7766 6650
Email: peter.haslam@niauk.org

Montreal, April 2013
The Nuclear Industry Association (NIA) is the trade association and representative voice of Britain’s civil nuclear industry. It represents more than 260 companies including the operators and vendors of nuclear power stations, those engaged in decommissioning, waste management, nuclear liabilities management and all aspects of the nuclear fuel cycle, nuclear equipment suppliers, engineering and construction firms, nuclear research organisations, and legal, financial and consultancy companies.

The NIA’s key objectives are to improve the commercial performance of the UK nuclear industry by assisting and supporting member companies to develop their businesses in the UK and overseas, and to improve the understanding of nuclear energy and the climate of political and public opinion in which the industry works and develops.

The Nuclear Industry Association supports a balanced low-carbon energy future for the UK including renewables, clean coal and gas - with nuclear at its low-carbon centre.

As home to the world’s first civil nuclear power station, West Cumbria has developed skills and expertise over more than 50 years which can not only aid Britain’s nuclear new build and decommissioning agenda but also assist other countries across the world with their nuclear plans.

Britain’s Energy Coast was established in 2009 with the mission of helping West Cumbria to strengthen its position at the forefront of Britain’s nuclear industry while at the same time diversify into other Clean Technologies such as wet renewable, biomass, wind and solar.

Working closely with local businesses in the energy supply chain and beyond, and the academic sector we deliver a wide range of services (detailed below) to businesses in West Cumbria designed to help them grow and prosper, while at the same time promoting West Cumbria’s attributes to new export markets and to potential inward investors across the world.

We aim to create a more dynamic, innovative and entrepreneurial environment which helps to stimulate new wealth, investment and jobs that directly benefit the West Cumbrian community and aids Britain’s response to the pressing challenges of climate change and energy security.

Our strategy for growth and diversification, the West Cumbria Economic Blueprint, is available to view at www.britainsenergycoast.co.uk/blueprint

Business Support: We provide a wide range of programmes and finance packages which span business start-ups to bespoke and specialist support for SME and large multinational companies operating in West Cumbria. We also provide support for businesses looking to develop new products and energy innovations.

Inward Investment: We provide a comprehensive package for inward investors ranging from financial support and assistance with integration into local supply chains to an in-depth sites and premises location service and tours of the local area to view facilities and potential partner companies. We also undertake activities to encourage West Cumbrian companies to seek new export opportunities, such as working with UKTI on the trade delegation to Korea and Japan (November 2012).

Commercial Property: We own and operate Westlakes Science & Technology Park, which is home to 70 diverse companies providing services to the nuclear and energy sectors and has a growing reputation for R&D (www.westlakessciencepark.co.uk). We also have an extensive portfolio of managed workspace in urban and rural locations in the area.

Funding for regeneration developments: Our recent projects include a new container handling facility at the Port of Workington, a state-of-the-art centre for developing traditional and new high-tech construction skills, and an office block for Sellafield workers in Whitehaven Town centre.

Britain’s Energy Coast has experience of working successfully with a range of partners at home and overseas.

These include our funders the Nuclear Decommissioning Authority, Nuclear Management Partners and their component companies URS, Areva and Amec; Sellafield Limited and members of their global supply chain, which employ around 2,000 people in West Cumbria. Other companies include Tata Steel, REACT Engineering, Westlakes Engineering, James Fisher Nuclear, PacTeC, Par Systems, Forth Engineering, National Nuclear Laboratory, Dalton Institute and local companies with a growing global reach such as TIS Cumbria Ltd and Safety Critical Analysis Ltd.

We have also developed strong relationships with the UK Government, in particular the Department of Energy & Climate Change and the Department for Business, Innovation & Skills. Both departments gave their full endorsement to the West Cumbria Economic Blueprint, expressing the national importance of our work and the work of those West Cumbrian businesses that will help to deliver the strategy.

URL: http://www.niauk.org
Address: Carlton House, 22a St James’s Square, London SW1Y 4JH
Contact: Peter Haslam, Public Policy Adviser
Phone: +44(0)20 7766 6650
Email: peter.haslam@niauk.org
The Nuclear Decommissioning Authority (NDA) is a Non-Departmental Public Body (NDPB) set up under the Energy Act 2004 to ensure that the UK’s 19 designated civil public sector nuclear sites are decommissioned and cleaned up safely and efficiently. Each of our 19 sites is operated by one of six Site Licence Companies (SLCs) under contract to the NDA. SLCs are responsible for day-to-day operations and the delivery of site programmes.

**Sellafiel Ltd**

The Sellafiel site has been operational since the 1940’s and is home to the world's first commercial nuclear power station – Calder Hall. Today the site encompasses a wide range of nuclear operations, including the decommissioning of redundant buildings, spent fuel management (with both Magnox and Oxide Fuel reprocessing facilities), and the safe management and storage of nuclear waste.

Sellafiel Ltd, and its supply chain, has a broad range of capabilities, from the operation of nuclear plants, through decommissioning, waste management, and the full spectrum of supporting activities (engineering design, strategy development, safety case development and project management). The site has significant experience in radioactive waste management and the management of legacy waste forms. This experience has included the processing and management of aerial and aqueous waste discharges throughout the site’s history.

Sellafiel has well-established and positive relationships with many Japanese nuclear companies, built up during the last 50 years. These relationships have covered such topics as spent fuel reprocessing, waste management (including returns of vitrified waste) and MOX fuel manufacturing.

**Low Level Waste Repository Ltd**

LLWR Repository Ltd (LLWR) is a waste management company that provides services to Customers to treat and dispose of low level radioactive waste. LLWR manage the national Low Level Waste Repository in West Cumbria and oversee a national Low Level Waste Programme to ensure that lower activity waste is managed effectively.

LLWR offers a portfolio of waste and packaging services from container supply, to the treatment and disposal of lower level waste. The customer base consists of nuclear and non-nuclear industry waste producers including nuclear sites owned by the NDA, public sector bodies and private sector businesses. LLWR provides services to over 30 different customers at more than 50 sites and has a reputation built on more than half a century of safe operations.

**Magon Ltd**

Magon is the management and operations contractor responsible for 10 nuclear sites and one hydroelectric plant in the UK.

The SLC is responsible for managing the generation, defueling, care and maintenance and final site clearance of the Magnox Reactor Fleet. The key activities are maintaining safety and security at all sites and managing the environmental impact of operational and decommissioning activities.

Across the portfolio of sites, innovative solutions are being sought to drive enhanced hazard remediation and accelerate the transition to care and maintenance. Significant conventional and nuclear safety challenges are being consistently managed and addressed. This includes dealing with the hazard presented by a number of legacy waste vaults, large quantities of fuel element debris and significant quantities of asbestos.

Activities are being combined and managed through the Magnex Optimised Decommissioning Programme which uses the ‘lead and learn’ concept to drive value. This approach will not only reduce costs in excess of £1 billion but shorter programmes by an aggregate of greater than 30 years.

**Research Sites Restoration Limited**

Research Sites Restoration Limited (RSRL) is the site licence company responsible for the closure programme at Harwell and Winfrith. Winfrith was a major centre for groundbreaking reactor development from the late 1950s to the 1990s whilst Harwell’s origins go back to the dawn of the UK’s nuclear industry in the 1940s.

Both sites are located in designated areas of outstanding natural beauty with Winfrith holding an SSSI (Site of Special Scientific Interest) designation. The location and desired end state for both sites have created several unique challenges in the decommissioning and restoration of the land.

RSRL’s expertise has developed over many decades, from operational reactor development to decommissioning, waste management and ground remediation. Further key areas of expertise include project management, business and safety case development and waste transfer.

**Dounreay Ltd**

Dounreay, on the north coast of Scotland was the centre of British fast reactor research and development for four decades during the 20th century. Today, it is the biggest nuclear site closure project in the UK.

The site consists of two fast breeder reactors that were cooled with liquid metal, a materials test reactor, fuel reprocessing facilities and fuel recovery and fabrication facilities. In addition the site includes a number of laboratories and historic and current waste disposal and storage sites, all at various stages of clean-up, dismantling and demolition.

The site includes a number of high hazard areas including the Dounreay shaft and silo, legacy waste storage facilities which present unique decommissioning challenges.

**Springfields Ltd**

Springfields is a nuclear fuel manufacturing site and is located near Preston in Lancashire. The site manufactures a range of fuel products for both UK and international customers and decommissions historic uranic residues and redundant facilities. From April 2010, the NDA permanently transferred ownership of the company to Westinghouse Electric including the freedom to invest for the future under the terms of a new 150 year lease.

**Capenhurst (Currently part of Sellafield Ltd)**

Capenhurst is located near Ellesmere Port in Cheshire, adjacent to Urenco (the Uranium Enrichment Company), and has an area of 32 hectares covered by the nuclear site licence. It was home to a uranium enrichment plant and associated facilities that ceased operation in 1982. The site is currently being transitioned into licenced ownership. This will facilitate the decommissioning of the remaining facilities, the continued management of the legacy and the securing of a sustainable future state for the site and its employees.
<table>
<thead>
<tr>
<th>Capability Index</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Decommissioning</strong></td>
</tr>
<tr>
<td><strong>Post-operational clean-out (POCO)</strong></td>
</tr>
<tr>
<td>1. AMEC plc</td>
</tr>
<tr>
<td>2. AREVA-ATKINS Partnership UK</td>
</tr>
<tr>
<td>3. Article 13</td>
</tr>
<tr>
<td>4. Avia Technology Ltd</td>
</tr>
<tr>
<td>5. Avon Protection</td>
</tr>
<tr>
<td>6. Babcock International Group</td>
</tr>
<tr>
<td>7. BHR Group</td>
</tr>
<tr>
<td>8. Brokk UK Ltd</td>
</tr>
<tr>
<td>9. Carillion plc</td>
</tr>
<tr>
<td>10. Centronic Ltd</td>
</tr>
<tr>
<td>11. CSE-Controls Limited</td>
</tr>
<tr>
<td>12. DBD Limited</td>
</tr>
<tr>
<td>13. HESCO Bastion Ltd</td>
</tr>
<tr>
<td>14. Industrial Technology Systems Ltd (ITS)</td>
</tr>
<tr>
<td>15. James Fisher Nuclear Ltd</td>
</tr>
<tr>
<td>16. JGC Engineering &amp; Technical Services Ltd</td>
</tr>
<tr>
<td>17. KDC Contractors Limited</td>
</tr>
<tr>
<td>18. Land and Marine Project Engineering Limited</td>
</tr>
<tr>
<td>19. Logical Personnel Solutions Limited</td>
</tr>
<tr>
<td>20. Matom Ltd</td>
</tr>
<tr>
<td>21. MCM International</td>
</tr>
<tr>
<td>22. Mirion Technologies (IST) Ltd</td>
</tr>
<tr>
<td>23. Mon Maintenance Services Ltd</td>
</tr>
<tr>
<td>24. Morson Projects Limited</td>
</tr>
<tr>
<td>25. National Nuclear Laboratory</td>
</tr>
<tr>
<td>26. NATIONAL SKILLS ACADEMY NUCLEAR</td>
</tr>
<tr>
<td>27. NIS Limited</td>
</tr>
<tr>
<td>28. Niprox Ltd</td>
</tr>
<tr>
<td>29. NUCLEAR DECOMMISSIONING SERVICES LTD (NDSSL)</td>
</tr>
<tr>
<td>30. Nuclear Engineering Services Limited (NES)</td>
</tr>
<tr>
<td>31. Nuclear Technologies (A Division of TUV SUD (UK) Limited)</td>
</tr>
<tr>
<td>32. Nuclear Technology Education Consortium</td>
</tr>
<tr>
<td>33. OC Robotics</td>
</tr>
<tr>
<td>34. Pursuit Dynamics PLC (PDX)</td>
</tr>
<tr>
<td>35. Radwise Limited</td>
</tr>
<tr>
<td>36. REACT Engineering Ltd</td>
</tr>
<tr>
<td>37. Respirx International Limited</td>
</tr>
<tr>
<td>38. Savant Limited</td>
</tr>
<tr>
<td>39. Savant Limited</td>
</tr>
<tr>
<td>40. Shadow Robot Company Ltd</td>
</tr>
<tr>
<td>41. Tata Steel Projects</td>
</tr>
<tr>
<td>42. The Technology Partnership plc</td>
</tr>
<tr>
<td>43. TIS Cumbria Limited</td>
</tr>
<tr>
<td>44. TWI Ltd</td>
</tr>
<tr>
<td>45. UCLAN Nuclear</td>
</tr>
<tr>
<td>46. UniTech Services Group Ltd</td>
</tr>
<tr>
<td>47. URS</td>
</tr>
<tr>
<td>48. Vector Technology Group - Industrial and Power Division</td>
</tr>
<tr>
<td>49. Venn Engineering Services Ltd</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Decontamination</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. AMEC plc</td>
</tr>
<tr>
<td>2. AREVA-ATKINS Partnership UK</td>
</tr>
<tr>
<td>3. Article 13</td>
</tr>
<tr>
<td>4. Babcock International Group</td>
</tr>
<tr>
<td>5. BHR Group</td>
</tr>
<tr>
<td>6. Brokk UK Ltd</td>
</tr>
<tr>
<td>7. Centronic Ltd</td>
</tr>
<tr>
<td>8. CSE-Controls Limited</td>
</tr>
<tr>
<td>9. Forth Engineering Cumbria (LTD)</td>
</tr>
<tr>
<td>10. Industrial Technology Systems Ltd (ITS)</td>
</tr>
<tr>
<td>11. Informed Solutions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Dismantling</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. AMEC plc</td>
</tr>
<tr>
<td>2. AREVA-ATKINS Partnership UK</td>
</tr>
<tr>
<td>3. Article 13</td>
</tr>
<tr>
<td>4. Babcock International Group</td>
</tr>
<tr>
<td>5. BHR Group</td>
</tr>
<tr>
<td>6. Brokk UK Ltd</td>
</tr>
<tr>
<td>7. Centronic Ltd</td>
</tr>
<tr>
<td>8. CSE-Controls Limited</td>
</tr>
<tr>
<td>9. Forth Engineering Cumbria (LTD)</td>
</tr>
<tr>
<td>10. Industrial Technology Systems Ltd (ITS)</td>
</tr>
<tr>
<td>11. Informed Solutions</td>
</tr>
</tbody>
</table>
### Waste Management

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nipro Ltd</td>
<td>51</td>
</tr>
<tr>
<td>NUCLEAR DECOMMISSIONING SERVICES LTD (NDSL)</td>
<td>52</td>
</tr>
<tr>
<td>OC Robotics</td>
<td>56</td>
</tr>
<tr>
<td>Radwiser Limited</td>
<td>51</td>
</tr>
<tr>
<td>REACT Engineering Ltd</td>
<td>62</td>
</tr>
<tr>
<td>Respirex International Limited</td>
<td>63</td>
</tr>
<tr>
<td>Savant Limited</td>
<td>65</td>
</tr>
<tr>
<td>Shadow Robot Company Ltd</td>
<td>66</td>
</tr>
<tr>
<td>Structure Vision Ltd</td>
<td>68</td>
</tr>
<tr>
<td>The Technology Partnership plc</td>
<td>70</td>
</tr>
<tr>
<td>TIS Cumbria Limited</td>
<td>71</td>
</tr>
<tr>
<td>TWI Ltd</td>
<td>72</td>
</tr>
<tr>
<td>UCLAN</td>
<td>Nuclear</td>
</tr>
<tr>
<td>URS</td>
<td>75</td>
</tr>
<tr>
<td>Venn Engineering Services Ltd</td>
<td>77</td>
</tr>
<tr>
<td>Westlakes Engineering</td>
<td>78</td>
</tr>
</tbody>
</table>

### Dismantling

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMEC plc</td>
<td>14</td>
</tr>
<tr>
<td>Article 13</td>
<td>17</td>
</tr>
<tr>
<td>Babcock International Group</td>
<td>20</td>
</tr>
<tr>
<td>BHR Group</td>
<td>21</td>
</tr>
<tr>
<td>Brokk UK Ltd</td>
<td>22</td>
</tr>
<tr>
<td>Carillion plc</td>
<td>24</td>
</tr>
<tr>
<td>Centronic Ltd</td>
<td>25</td>
</tr>
<tr>
<td>James Fisher Nuclear Ltd</td>
<td>36</td>
</tr>
<tr>
<td>JGC Engineering &amp; Technical Services Ltd</td>
<td>37</td>
</tr>
<tr>
<td>KDC Contractors Limited</td>
<td>38</td>
</tr>
<tr>
<td>Logical Personnel Solutions Limited</td>
<td>41</td>
</tr>
<tr>
<td>Mon Maintenance Services Ltd (MMS)</td>
<td>45</td>
</tr>
<tr>
<td>NATIONAL SKILLS ACADEMY NUCLEAR</td>
<td>49</td>
</tr>
<tr>
<td>NIS Limited</td>
<td>50</td>
</tr>
<tr>
<td>Nipro Ltd</td>
<td>51</td>
</tr>
<tr>
<td>NUCLEAR DECOMMISSIONING SERVICES LTD (NDSL)</td>
<td>52</td>
</tr>
<tr>
<td>OC Robotics</td>
<td>56</td>
</tr>
<tr>
<td>REACT Engineering Ltd</td>
<td>62</td>
</tr>
<tr>
<td>Respirex International Limited</td>
<td>63</td>
</tr>
<tr>
<td>Savant Limited</td>
<td>65</td>
</tr>
<tr>
<td>UCLAN</td>
<td>Nuclear</td>
</tr>
<tr>
<td>URS</td>
<td>75</td>
</tr>
<tr>
<td>Venn Engineering Services Ltd</td>
<td>77</td>
</tr>
</tbody>
</table>

### De-energising & demolition

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AREVA-ATKINS Partnership UK</td>
<td>16</td>
</tr>
<tr>
<td>Article 13</td>
<td>17</td>
</tr>
<tr>
<td>Arvia Technology Ltd</td>
<td>18</td>
</tr>
<tr>
<td>Babcock International Group</td>
<td>20</td>
</tr>
<tr>
<td>BHR Group</td>
<td>21</td>
</tr>
<tr>
<td>Brokk UK Ltd</td>
<td>22</td>
</tr>
<tr>
<td>C W Fletcher</td>
<td>23</td>
</tr>
<tr>
<td>Centronic Ltd</td>
<td>25</td>
</tr>
<tr>
<td>CSE-Controls Limited</td>
<td>26</td>
</tr>
<tr>
<td>DBD Limited</td>
<td>27</td>
</tr>
<tr>
<td>Eden Nuclear and Environment Limited</td>
<td>28</td>
</tr>
<tr>
<td>Galson Sciences Ltd</td>
<td>31</td>
</tr>
<tr>
<td>HESCO Bastion Ltd</td>
<td>32</td>
</tr>
<tr>
<td>Industrial Technology Systems Ltd (ITS)</td>
<td>34</td>
</tr>
<tr>
<td>James Fisher Nuclear Ltd</td>
<td>36</td>
</tr>
<tr>
<td>JGC Engineering &amp; Technical Services Ltd</td>
<td>37</td>
</tr>
<tr>
<td>KDC Contractors Limited</td>
<td>38</td>
</tr>
<tr>
<td>Logical Personnel Solutions Limited</td>
<td>41</td>
</tr>
<tr>
<td>MCM International</td>
<td>43</td>
</tr>
<tr>
<td>Mirion Technologies (IST) Ltd</td>
<td>44</td>
</tr>
<tr>
<td>Mon Maintenance Services Ltd (MMS)</td>
<td>45</td>
</tr>
<tr>
<td>Morson Projects Limited</td>
<td>46</td>
</tr>
<tr>
<td>NATIONAL SKILLS ACADEMY NUCLEAR</td>
<td>49</td>
</tr>
</tbody>
</table>

### Waste Processing, conditioning & passivation

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMEC plc</td>
<td>14</td>
</tr>
<tr>
<td>Article 13</td>
<td>17</td>
</tr>
<tr>
<td>Babcock International Group</td>
<td>20</td>
</tr>
<tr>
<td>BHR Group</td>
<td>21</td>
</tr>
<tr>
<td>C W Fletcher</td>
<td>23</td>
</tr>
<tr>
<td>Centronic Ltd</td>
<td>25</td>
</tr>
<tr>
<td>CSE-Controls Limited</td>
<td>26</td>
</tr>
<tr>
<td>DBD Limited</td>
<td>27</td>
</tr>
<tr>
<td>Eden Nuclear and Environment Limited</td>
<td>28</td>
</tr>
<tr>
<td>Galson Sciences Ltd</td>
<td>31</td>
</tr>
<tr>
<td>HESCO Bastion Ltd</td>
<td>32</td>
</tr>
<tr>
<td>Industrial Technology Systems Ltd (ITS)</td>
<td>34</td>
</tr>
<tr>
<td>James Fisher Nuclear Ltd</td>
<td>36</td>
</tr>
<tr>
<td>JGC Engineering &amp; Technical Services Ltd</td>
<td>37</td>
</tr>
<tr>
<td>KDC Contractors Limited</td>
<td>38</td>
</tr>
<tr>
<td>Logical Personnel Solutions Limited</td>
<td>41</td>
</tr>
<tr>
<td>MCM International</td>
<td>43</td>
</tr>
<tr>
<td>Mirion Technologies (IST) Ltd</td>
<td>44</td>
</tr>
<tr>
<td>Mon Maintenance Services Ltd (MMS)</td>
<td>45</td>
</tr>
<tr>
<td>Morson Projects Limited</td>
<td>46</td>
</tr>
<tr>
<td>NATIONAL SKILLS ACADEMY NUCLEAR</td>
<td>49</td>
</tr>
</tbody>
</table>

### Waste storage & transport

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMEC plc</td>
<td>14</td>
</tr>
<tr>
<td>Article 13</td>
<td>17</td>
</tr>
<tr>
<td>Babcock International Group</td>
<td>20</td>
</tr>
<tr>
<td>BHR Group</td>
<td>21</td>
</tr>
<tr>
<td>C W Fletcher</td>
<td>23</td>
</tr>
<tr>
<td>Centronic Ltd</td>
<td>25</td>
</tr>
<tr>
<td>CSE-Controls Limited</td>
<td>26</td>
</tr>
<tr>
<td>DBD Limited</td>
<td>27</td>
</tr>
<tr>
<td>Eden Nuclear and Environment Limited</td>
<td>28</td>
</tr>
<tr>
<td>Galson Sciences Ltd</td>
<td>31</td>
</tr>
<tr>
<td>HESCO Bastion Ltd</td>
<td>32</td>
</tr>
<tr>
<td>Industrial Technology Systems Ltd (ITS)</td>
<td>34</td>
</tr>
<tr>
<td>James Fisher Nuclear Ltd</td>
<td>36</td>
</tr>
<tr>
<td>JGC Engineering &amp; Technical Services Ltd</td>
<td>37</td>
</tr>
<tr>
<td>KDC Contractors Limited</td>
<td>38</td>
</tr>
<tr>
<td>Logical Personnel Solutions Limited</td>
<td>41</td>
</tr>
<tr>
<td>MCM International</td>
<td>43</td>
</tr>
<tr>
<td>Mirion Technologies (IST) Ltd</td>
<td>44</td>
</tr>
<tr>
<td>Mon Maintenance Services Ltd (MMS)</td>
<td>45</td>
</tr>
<tr>
<td>Morson Projects Limited</td>
<td>46</td>
</tr>
<tr>
<td>NATIONAL SKILLS ACADEMY NUCLEAR</td>
<td>49</td>
</tr>
</tbody>
</table>
6  Waste management

Waste storage & transport

NIS Limited ........................................ 50
Niproj Ltd ........................................ 51
NUCLEAR DECOMMISSIONING SERVICES LTD (NDSL) ................................ 52
Nuclear Engineering Services Limited (NES) .................................................. 53
Nuclear Technologies (A Division of TUV SUD (UK) Limited) ................... 54
Nuclear Technology Education Consortium ...................................................... 55
Ove Arup & Partners Hong Kong Ltd .............................................................. 57
Respirox International Limited ................................................................. 63
Risktec Solutions Limited ............................................................ 64
Savant Limited ........................................ 65
Structure Vision Ltd ......................................... 68
Tata Steel Projects ............................................................................. 69
TWI Ltd .................................................. 72
UCLAN | Nuclear ........................................ 73
URS ............................................................. 75
Venn Engineering Services Ltd .............................................................. 77
Westlakes Engineering ................................................................. 78

AMEC plc ................................................ 14
Applied Seismology Consultants Ltd ......................................................... 15
AREVA-ATKINS Partnership UK ............................................................ 16
Article 13 .................................................................................. 17
Avon Protection ........................................................................... 19
Babcock International Group .............................................................. 20
Centronic Ltd ................................................................................ 25
CSE-Controls Limited ................................................................. 26
DBD Limited ............................................................................. 27
Eden Nuclear and Environment Limited ........................................... 28
Forth Engineering Cumbria (LTD) ....................................................... 30
Galson Sciences Ltd .................................................................. 31
HR Wallingford ........................................................................ 33
Industrial Technology Systems Ltd (ITS) ............................................... 34
Informed Solutions ..................................................................... 35
James Fisher Nuclear Ltd ................................................................. 36
KDC Contractors Limited ................................................................. 38
Logical Personnel Solutions Limited .................................................. 41
Malam Ltd .................................................................................. 42
MCM International .................................................................... 43
Morson Projects Limited ................................................................. 46
National Nuclear Laboratory ............................................................. 47
National Physical Laboratory ............................................................ 48
NATIONAL SKILLS ACADEMY NUCLEAR ........................................ 49
Niproj Ltd .................................................................................. 51
NUCLEAR DECOMMISSIONING SERVICES LTD (NDSL) .................... 52
Nuclear Technologies (A Division of TUV SUD (UK) Limited) .................. 54
Nuclear Technology Education Consortium ........................................... 55
Raddec International Ltd ................................................................. 60
Radwise Limited ...................................................................... 61
REACT Engineering Ltd ................................................................. 62
Risktec Solutions Limited ................................................................. 64
The Technology Partnership plc ........................................................... 70
UCLAN | Nuclear ..................................................................... 73
UniTech Services Group Ltd ............................................................... 74
URS ......................................................................................... 75

7  Waste disposal

(licensing/repository)

AMEC plc ................................................ 14
Applied Seismology Consultants Ltd ......................................................... 15
AREVA-ATKINS Partnership UK ............................................................ 16
Article 13 .................................................................................. 17
Arvia Technology Ltd ........................................................................
Babcock International Group ..............................................................
Centronic Ltd ................................................................................
CSE-Controls Limited .................................................................
DBD Limited .............................................................................
Eden Nuclear and Environment Limited ...........................................
Forth Engineering Cumbria (LTD) ......................................................
Galson Sciences Ltd ...................................................................
HR Wallingford ........................................................................
Industrial Technology Systems Ltd (ITS) ...........................................
Informed Solutions ................................................................
James Fisher Nuclear Ltd .................................................................
KDC Contractors Limited .................................................................
Logical Personnel Solutions Limited ...................................................
MCM International ................................................................
Ove Arup & Partners Hong Kong Ltd ...................................................
Respirox International Limited ...........................................................
Risktec Solutions Limited .................................................................
Savant Limited ........................................................................
Structure Vision Ltd .................................................................
Tata Steel Projects .....................................................................
TWI Ltd ..................................................................................
UCLAN | Nuclear ................................................................
URS .....................................................................................
Venn Engineering Services Ltd ..........................................................
9 Site restoration

Environmental remediation
(land / groundwater)

10 Post clean-up release surveys

Other

Site Security
HECO Bastion Ltd

Real Estate and Management Services to the Nuclear Industry
Prolrecio Nuclear Limited

Project & Facilities Management
Savant Limited

Joint development of novel software solutions for ultrasonic NDT
Sound Mathematics Ltd

Dirertory of UK Decommissioning Technologies and Capabilities – Prow in the UK and overseas

Company A to Z

A AMEC plc ........................................ 14
Applied Seismology Consultants Ltd 15
AREVA-ATKINS Partnership UK 16
Article 13 ..................................................... 17
Ariva Technology Ltd 18
Avis Protection 19
B Babcock International Group 20
BHR Group ........................................... 21
Brokk UK Ltd ........................................ 22
C C W Fletcher 23
Carillion plc ........................................... 24
Centronic Ltd .......................................... 25
CSE Controls Limited 26
D DDB Limited 27
E Eden Nuclear and Environment Limited 28
F FLOWERVE FLOW CONTROL UK 29
Forth Engineering Cumbria (LTD) 30
G Galson Sciences Ltd .................................. 31
H HESCO Bastions Ltd 32
HR Walingford .......................................... 33
I Industrial Technology Systems Ltd (ITS) 34
Infomed Solutions ................................ 35
J James Fisher Nuclear Ltd .................................. 36
JGC Engineering & Technical Services Ltd .................................. 37
K KDC Contractors Limited .................................. 38
L Land and Marine Project Engineering Limited .................................. 39
Lloyd’s Register / Scandpower 40
Logical Personnel Solutions Limited 41
M Matom Ltd ..................................................... 42
MCM International ........................................ 43
Mirion Technologies (ITS) Ltd 44
Mon Maintenance Services Ltd (MMS) .................................. 45
Morson Projects Limited .................................. 46
N National Nuclear Laboratory .................................. 47
National Physical Laboratory .................................. 48
NATIONAL SKILLS ACADEMY NUCLEAR .................................. 49
Nprojx Ltd ..................................................... 51
OC Robotics .................................................. 52
Nuclear Decommissioning Services Ltd (NDSL) .................................. 53
Nuclear Engineering Services Limited (NES) .................................. 54
Nuclear Technologies (A Division of TUV Sud UK) Limited .................................. 55
Nuclear Technology Education Consortium .................................. 56
O Ove Arup & Partners Hong Kong Ltd .................................. 57
P Prolrecio Nuclear Limited .................................. 58
Pursuit Dynamics PLC (PDX) .................................. 59
R Radde International Ltd .................................. 60
Radwise Limited ........................................ 61
React Engineering Ltd ........................................ 62
Savant Limited ........................................ 63
Savant Limited ........................................ 65
Savant Limited ........................................ 66
Shadow Robot Company Ltd .................................. 67
Sound Mathematics Ltd .................................. 68
Structure Vision Ltd .................................. 69
T Tata Steel Projects .................................. 70
The Technology Partnership plc .................................. 71
TIS Cumbria Limited .................................. 72
TWL Ltd ..................................................... 73
U UCLAN Nuclear ........................................ 74
UniTech Services Group Ltd .................................. 75
URS ..................................................... 77
V Vector Technology Group - Industrial and Power Division .................................. 78
Venn Engineering Services Ltd .................................. 78
Westlake Engineering ........................................ 79
AMEC is a focused supplier of consultancy, engineering and project management services to its customers worldwide.

AMEC plc

Brief Organisation profile
Established: 1848
Capital: £3.6 billion GBP
Number of Employees: 30,000
AMEC is a focused supplier of consultancy, engineering and project management services to its customers in the world’s clean energy, oil and gas, mining, environmental and infrastructure markets. With annual revenues of some £3.3 billion, AMEC designs, delivers and maintains strategic and complex assets and employs over 30,000 people in around 48 countries worldwide.

With over 50 years experience in the nuclear market, we ensure the safe and efficient operation of nuclear plants, from concept through to decommissioning.

AMEC has worked on a number of international nuclear programmes, including the construction and operation of Tokai and Monju in Japan, Bruce Power in Canada, and much of the UK PWR and Magnox fleet.

Key services include: Project management, engineering & construction services, waste characterization, front-end design and optioneering, radiological and environmental consulting, supply chain management, commissioning, decommissioning technologies, decommissioning, environmental remediation & waste management services.

Main products/services or technologies
Site management
• Nuclear site management and operational governance
• Nuclear site and technology licensing – advice and consulting
• Government advisory and professional consulting

Reactor Services – Engineering & Programme Management
• Operations and maintenance
• Operational safety
• Decommissioning
• De-energizing
• Decontamination
• Reactor Support and Environmental Services

Waste Management
• Radiological waste management and repository storage solutions
• Benchmarking of repository programmes against international guidance (IAEA, NEA)
• Development and assessment of deep and shallow reprocessing concepts and designs, including for spent fuel, high-level and low-level wastes

Environmental Services
• Radiological contamination services
• Waste stream analysis
• On-site and off-site decommissioning and remediation
• Mobile and static radiological assessment technology

Specialist Consultancy
• Test rig and robotic equipment
• ROV for inaccessible welding, cutting and investigation
• ROV 3D scanning of inaccessible areas
• Rose-Nib drilling and deep sample retrieval

Nuclear re-start programmes
• Specialists in reactor re-start programmes
• Safety case and scenario analysis
• Engineering and management support

Experience/results, past clients
Joint managing partner of the Sellafield nuclear site where the UK’s spent fuel and high-level wastes are stored (UK NDA).

Adviser to UK government on nuclear safety and decommissioning matters (NIA).

AMEC was chosen as the Architect Engineer company to support EDF Energy in building the new fleet of EPR reactors in the UK. (EDF Energy)

AMC is leading the re-start of the Bruce-K nuclear reactor in Ontario, Canada (AECI).

AMC played a central role in the construction and operation of the Tokai power station in Japan. (IAEA)

Logistics management and cost modelling for UK spent fuel management plans (CoRWM).

AMC’s [Scan sort] and [ScanEplus] technology solutions have been used to support the Fukushima clean-up efforts.

Microseismics for nuclear waste disposal containment feasibility and monitoring

Applied Seismology Consultants Ltd

Brief Organisation profile
ASC specializes in providing commercial microseismic monitoring, processing and advanced analyses in a range of sectors including mining, radwaste storage, petroleum, geothermal, carbon sequestration, engineering, and laboratory testing.

We are pioneering the commercialization of technologies for nuclear waste disposal monitoring with our InSite Seismic Processor software and OMNIBUS hardware range.

ASC was founded in 1997 by Prof. Paul Young. ASC is an Itasca International Company following a merger in 2009 and is the UK agent for Itasca modelling codes.

ASC has a Quality Management System certified in accordance with the standard BS EN ISO 9001:2008.

Main products/services or technologies
Repository-wide seismic monitoring setup and operation, with three dimensional network optimisation.

Acoustic Emission monitoring to detect fractures around engineered structures and delineate potential fluid pathways.

Three-dimensional ultrasonic surveys to actively examine rock to quantify damage and disturbance accumulation.

Embedding of sensors within structures, such as concrete bulkheads, to assess integrity.

Validation and development of numerical models for predictive modelling of repository behaviour.

InSite software is used extensively in ASC’s nuclear waste consulting operations and is now used by nuclear waste stakeholders and university research departments for in-house processing and management of seismic data.

ASC supplies state-of-the-art microseismic and acoustic emission monitoring equipment using the latest data acquisition and computing technologies to organisations in charge of evaluating, selecting and operating deep geological repositories for radioactive waste.

Experience/results, past clients
ASC has designed and performed international microseismic, Acoustic Emission (AE) and ultrasonic monitoring projects for underground engineered structures. The technologies also provide data for validation of numerical models that predict the effects of the operating conditions over large time scales.

We have managed large EC-funded research consortia and participate in projects to advance AE and ultrasonic technologies for examining and quantifying rock disturbance and fluid pathways.

We continue to manage acquisition, and perform data processing, for long-term experiments simulating disposal of radioactive waste.

Clients include SKB, AECL, Andra, Posiva, EU.

Company Information
Website address: www.appliedseismology.com
Address: 5 Claremont Buildings, 5 Claremont Buildings, Shrewsbury, SY1 1RT, UK
Phone: +44 (0) 1743 271440
Fax: +44 (0) 1743 242286
Email: consulting@appliedseismology.com
The AREVA-Atkins Partnership UK - offering combined expertise to the UK decommissioning and fuel cycle market

AREVA-ATKINS Partnership UK

Brief Organisation profile
AREVA-Atkins Partnership UK has been established in 2012 and builds on the experience and resources from the parent companies. AREVA has 48,000 employees worldwide and ATKINS has 17,500 employees among which 9,000 are based in the UK.

Main products/services or technologies
The AREVA-Atkins Partnership offers a unique combination of international technology along with unbeatable design and engineering consultancy. The offering, based on the experience and expertise of its parent companies, covers all areas of decommissioning and waste management activities: engineering, construction, operations...

Experience/results, past clients
We are providing services and solutions to all sectors of the nuclear industry to various customers including: Kansai Electric, TEPCO, Chubu Electric, KMP, CENP, Duke Energy, Exelon, EDF, UK Nuclear Decommissioning Authority, Sellafield Ltd., Magnox, ...

Article 13

Brief Organisation profile
Article 13 are a strategic consultancy, established 15 years ago. Based in the UK, we operate globally with regional partners in Asia, Africa, Middle East and North America. We bring together global experts from our formal associate network.

We have particular experience operating within the nuclear sector (from new build through to decommissioning). Our work typically involves working alongside organisations (often acting as a critical friend) around their communication and engagement strategy and plans – international, national, regional and local stakeholders.

Main products/services or technologies
We support organizations to address the key issues facing their organization and their stakeholders.

A particular area of expertise in the nuclear sector is around Stakeholder communication and engagement

- Stakeholder and issue mapping
- Consultation engagement analysis (including engaging hard to reach groups)
- Building communication strategies based on material issues
- Activation and relationship building
- Liaising with multiple stakeholders (national, regional and local)
- Including government bodies
- Developing, managing, delivering and evaluating stakeholder engagement programmes in a complex communications environment
- Spokesperson training
- Media relations team
- Crisis communications

Other services include
- External review and appraisal of existing programmes – what is working, what is not, how can existing programmes deliver greater value to the business and society
- Impact assessments – including environment, social and health impact assessments (based on current baseline and with future projections)
- Strategy development – short and long-term planning
- Training / capacity building - including E-learning
- Stakeholder engagement and communications – engaging stakeholders through traditional and online media
- Behaviour change and social marketing - including social return on investment and impact analysis

Experience/results, past clients
Our experience and clients, include:
- British Nuclear Fuels Limited: Worked with senior management to understand key stakeholder perspectives of the areas of future risk for the nuclear industry
- World Nuclear Association: Messaging work for the Uranium Working Group of the WNA on producing a stakeholder relevant and understandable mission and vision
- Nuclear Decommissioning Authority: Framework suppliers to the UK NDA around stakeholder engagement and communication
- International Atomic Energy Agency: engaged as an advisor for the development of Guidance on Stakeholder Involvement in Decommissioning
- NDA: Acted as the lead facilitator and process adviser for the National Stakeholder Group
Arvia™ offers a unique patented treatment process for the destruction of aqueous radioactive organic waste streams

**Arvia Technology Ltd**

**Brief Organisation profile**
Arvia™ has established a process for the destruction of orphan radioactive organic waste produced in the course of nuclear power generation, decommissioning and at stages within the nuclear fuel cycle. At the heart of this process is the organic destruction cell (ODC).

- Specifically developed for the demands of the nuclear industry, it has no moving parts; it is chemical free and can destroy a wide range of radioactive organic waste streams, previously thought of as orphan.

Established in 2007 the business has grown significantly in the subsequent years, developing a team of world class technical experts, scientists, engineers and support staff which is led by an internationally recognized blue chip management team.

**Main products/services or technologies**
Using the Arvia patented Organic Destruction Cell (ODC) and a novel proprietary absorbent material, the waste is treated in these simple steps:

- **Adsorption** adsorption is achieved by the fluidisation into the supernatant. This is rapid due to the non-porous nature of the adsorbent.
- **Separation** the loaded adsorbent settles due to gravity sedimentation and forms a compact bed between the electrodes of an electrochemical cell.
- ** Destruction** electrochemical oxidation of the adsorbed organic contaminant is achieved by passing a direct electric current across the adsorbent bed. The organs are destroyed and converted to CO₂ and H₂O. The adsorbent is then immediately re-used for further treatment.

The Arvia™ process offers distinct benefits:

- Costs are reduced due to low energy usage in the process.
- Reduction of risk and cost due to treatment taking place on site.
- The resultant secondary wastes are minimal and can be disposed of via existing site disposal routes.
- It is an environmentally friendly process.

**Experience/results, past clients**
Arvia’s Organic Destruction Cell (ODC) has won a number of environmental, engineering and innovation awards from recognised industry bodies, including the Rushlight Clean Environment Award 2010 for a collaborative project with Magnox Limited at their Trawsfynydd decommissioning site.

Arvia has conducted treatability trials on a number of different organic and radioactive wastes, known to be issues for the Japanese nuclear industry.

Industry recognised progress has been made in the treatment of mixed waste containing Diesel Oil, Marine Oils, Turbine Oils, Pyrinsil™, PCB, TRP and PFPE (Perfluoropolyether). Arvia’s commitment to serving the Japanese nuclear industry has seen it undertake experiments on wastes containing caesium, known to be a particular problem of the nuclear industry.

**Arvia’s Organic Destruction Cell (ODC)**
- Cost effective.
- Energy efficient.
- Chemical free.
- No moving parts.
- Non-porous nature of the adsorbent.
- 

**Post-operational clean-out (POCO)**
The loaded adsorbent is recycled and re-used. The loaded adsorbent is then immediately re-used for further treatment.

**Type of business**
Environmental remediation (land / groundwater) - Waste disposal (licensing / repository) - Dismantling - Decontamination - Post-operational clean-out (POCO) - Environmental remediation (land / groundwater)

**Company Information**
Website address: www.arviatechnology.com
Address: Daresbury Park Centre, Runcorn Lane, Daresbury, Warrington, WA4 4TA
Phone: +44 (0) 845 1231264
Email: info@arviatechnology.com

---

**Avon Protection are world leaders in CBRN respiratory protective equipment**

**Avon Protection**

**Brief Organisation profile**
Avon Protection is the recognized global market leader in respiratory protection system technology. An unrivalled 80 year pedigree in military tactical Personal Protective Equipment (PPE) deployment strategies.

Avon Protection’s expanding global client base now includes military forces, civil and first line defence troops, emergency service teams and industrial, marine, nuclear, mineral and oil extraction site personnel. All put their trust in Avon’s advanced respiratory protection solutions to shield them from every possible threat.

Avon is also a leading supplier of high quality flexible storage solutions that meet the performance demands of military and industrial consumers worldwide.

Avon provide storage solutions for fuel, water, food grade liquids and non-hazardous chemicals using flexible transport, static, embankments and open top collapsible storage tanks.

**Main products/services or technologies**
Avon’s latest range of products is the 50 series of masks which includes the C50, FM50 & FM53.

The C50 has been developed using Avon’s successful M50 based US Military Joint Services General Purpose Mask.

The C50 offers high protection and an outstanding field of vision and superior comfort. The innovative design features optimize the user’s time in the operational arena for CBRN protection.

Also, with the appropriate filter, the C50 protects against a range of CBRN threats including chemical warfare agents, toxic industrial chemicals (TICs), toxic industrial materials (TIMs), biological and radiological hazards and riot agents.

Avon also offers a CBRN escape hood. The Avon NH15 compact CBRN escape hood, is the smallest NIOSH certified CBRN Air Purifying Escape Respirator on the market. Its low cost makes it ideal to provide support for oil and gas workers, emergency medical services and fire officers seeking immediate or emergency respiratory protection in a CBRN or H2S sour gas scenario.

The NH15 hood has a five year shelf life and provides a high level of respiratory, eye and face protection for a minimum of fifteen minutes to allow the user to evacuate from a contaminated area. Made of clear material, the NH15 protects against all airborne CBRN threats and from liquid agent splashes.

Twin low-profile filters on a unique hing system feature the latest filtration media which reduces breathing resistance and a front reflector makes it easier to identify colleagues in low light environments.

**Experience/results, past clients**
Avon Protection is the global market leader in CBRN respiratory protection system technology. We have been designing and manufacturing masks for over 80 years and today we are an essential element of numerous national CBRN defense and Personal Protective Equipment (PPE) deployment strategies throughout Europe, the Middle East, Asia, Australia and the US.

Avon’s expanding global client base now includes military forces, police, civil and first line defence troops, emergency service teams and industrial, marine, nuclear, mineral and oil extraction site operatives. All put their trust in Avon’s superior respiratory technology to protect their personnel from all extremes of CBRN threat. That is why there is an Avon protective system for almost every respiratory threat or CBRN scenario.

Avon was awarded the Joint Services General Purpose Mask Program in 2000 supplying the M50 respirator to all US Armed Forces & Coast Guard.

**Company Information**
Website address: www.avon-protection.com
Address: Hampton Park West, Samminton Road, Middlesbrough, TS1 2NB
Phone: +44 1225 896705
FAX: +44 1225 896301
Email: protection@avon-rubbair.com

**Name of distributor/agent in Japan:**
MIC Japan, Ltd

**Address:**
Noppon Seimei Akaoko #2 Bldg 1-16, Akaoko 7-Chome, Minato-ku, Tokyo, 107-0052
Phone: +81 3403 9611
FAX: +81 3 5771 7710
Email: shima@micj.co.jp

**Products and Services**
- Decommissioning
- Waste management
- Waste storage & transport
- Site restoration
- Post-operational clean-out (POCO)
Babcock is the UK’s largest specialist nuclear support services organisation, employing over 3,500 nuclear engineers, scientists and technicians

Brief Organisation profile
Babcock is the UK’s leading engineering support services organisation with revenue of circa £3bn in 2012 and an order book of £13 billion. Babcock employs over 25,000 skilled staff workers who design, build, manage, operate and maintain assets that are vital to the delivery of many key public services, both in the UK and overseas. We offer our services to all industries where Babcock can deliver a competitive advantage to our clients. Babcock is on track to complete some of the UK’s most challenging decommissioning projects. Our decommissioning projects are supported by our dedicated engineering and project management teams, which work closely with our clients to meet their needs.

We take great pride in the considerable depth and breadth of our people’s expertise. We have over 25,000 skilled staff workers who design, build, manage, operate and maintain assets that are vital to the delivery of many key public services, both in the UK and overseas. Babcock is a partner which can be trusted to deliver.

Main products/services or technologies
Babcock is the UK’s largest specialist nuclear support services organisation, employing over 3,500 nuclear engineers and scientists. This highly skilled workforce, combined with our experience as a nuclear site licensee and operator, enables Babcock to provide safe, effective solutions for the entire nuclear lifecycle, from design and build, through operation and maintenance, to decommissioning, waste management and remediation.

Babcock’s nuclear experience includes site management and operations, design services, decommissioning and waste management, programme management, operational support and new build.

Babcock has successfully completed many major nuclear projects for customers throughout the world. We have unrivalled experience and expertise in graphite reactor decommissioning, as well as graphite removal, handling and disposal. We also have detailed practical experience of cadmium reactor decommissioning.

We have undertaken a number of projects and provided engineering and technical support to major Japanese power utilities, while our UK customers include:
- The Nuclear Decommissioning Authority
- Sellafield Limited
- Magnox Limited
- EDF Energy

BHR Group is an independent industrial consultancy and technology organisation that has provided design and testing services to the nuclear industry for over 40 years.

Brief Organisation profile
BHR Group specializes in fluid engineering and has provided design and testing services to the nuclear industry for over 40 years. BHR Group has provided design and testing services to the nuclear industry for over 40 years. BHR Group has completed some of the UK’s most challenging decommissioning projects. Our decommissioning projects are supported by our dedicated engineering and project management teams, which work closely with our clients to meet their needs. BHR Group is on track to complete some of the UK’s most challenging decommissioning projects. Our decommissioning projects are supported by our dedicated engineering and project management teams, which work closely with our clients to meet their needs.

We take great pride in the considerable depth and breadth of our people’s expertise. We have over 25,000 skilled staff workers who design, build, manage, operate and maintain assets that are vital to the delivery of many key public services, both in the UK and overseas. We offer our services to all industries where BHR Group can deliver a competitive advantage to our clients.

Main products/services or technologies
BHR Group provides research and development work, scale-up design services, testing and consultancy services to major corporations in the UK and overseas. BHR Group has successfully completed over 100 projects and provided engineering and technical support to major Japanese power utilities. BHR Group has completed some of the UK’s most challenging decommissioning projects. Our decommissioning projects are supported by our dedicated engineering and project management teams, which work closely with our clients to meet their needs. BHR Group is on track to complete some of the UK’s most challenging decommissioning projects. Our decommissioning projects are supported by our dedicated engineering and project management teams, which work closely with our clients to meet their needs.

We take great pride in the considerable depth and breadth of our people’s expertise. We have over 25,000 skilled staff workers who design, build, manage, operate and maintain assets that are vital to the delivery of many key public services, both in the UK and overseas. We offer our services to all industries where BHR Group can deliver a competitive advantage to our clients. BHR Group has completed some of the UK’s most challenging decommissioning projects. Our decommissioning projects are supported by our dedicated engineering and project management teams, which work closely with our clients to meet their needs.

We take great pride in the considerable depth and breadth of our people’s expertise. We have over 25,000 skilled staff workers who design, build, manage, operate and maintain assets that are vital to the delivery of many key public services, both in the UK and overseas. Babcock is a partner which can be trusted to deliver.
Remote Controlled Vehicles

Brokk UK Ltd

Post-operational clean-out (POCO)
Decontamination
Dismantling
De-energising & demolition
Waste processing, conditioning & passivation
Waste storage & transport
Waste disposal (licensing / repository)
Site radiological assessment & material sorting
Environmental remediation (land / groundwater)
Post clean-up release surveys

Brief Organisation profile
- Established: 1974
- Number of Employees: 30

Main products/services or technologies
- Remote Waste segregation packaging / sorting

Experience/results, past clients
- Reactor decommissioning / demolition
- Remote Waste management sorting packaging / size reduction
- Projects completed in America, Russia, China, UK, Sweden, Germany, France and Japan

Manufacturing high precision components in a range of metals and metal alloys for aerospace, nuclear, space and defense markets

C W Fletcher

Brief Organisation profile
C W Fletcher was established in 1891. It currently has a turnover of around £23 million per year and employs 215 people. The company is privately owned and listed as a Limited Company. C W Fletcher operates in aerospace, space, defense, nuclear and other high technology industries.

Main products/services or technologies
- Machining, either milling or turning in sizes up to 2 metres in diameter
- Fabrication, sheet metal work and press forming are also core skills
- Supply chain management, low cost sourcing, project management and access to a range of high technology companies and universities

Experience/results, past clients
Current customers include: KHI, IHI and MHI in Japan either directly or through Fuji Industries Co Limited
- Rolls Royce PLC, Sellafield Limited, Sulzer Eldim, M B Aerospace, Meggitt, Astrium, EADS and ITP

Company Information
Website address: www.cwfletcher.co.uk
Address: Sterling Works, Mansfield Road, Wakefield, WF2 9QJ, England
Phone: +44 (0)114 294 2200
Fax: +44 (0)114 294 2211
Email: info@cwfletcher.co.uk

Name of distributor/agent in Japan:
Mr Noriyuki Ueno
Fuji Industries Co Limited
Address: London Branch, 2628 Hammersmith Grove, London, W6 7BA, England
Phone: +44 (0) 20 7938 2088
Fax: +44 (0) 20 7938 3688
Email: n.ueno@ficldn.co.uk

Company Information
Website address: Brokkuk.co.uk
Address: 2A Moss End Business Village, Crooklands, Milnthorpe, Cumbria LA7 7EJ
Phone: +44 1539 824 063
Fax: +44 1539 824 360
Email: Mike.evans@brokkuk.co.uk

Name of distributor/agent in Japan:
BGE Company Limited
Address: Crown Takahashi Bldg 6F 2-6-7 Hijishii-Kanda Chiyoda-Ku Tokyo 101-0031
Phone: +81 3 3864 4861

Company Information
Website address: www.cwfletcher.co.uk
Address: Sterling Works, Mansfield Road, Wakefield, WF2 9QJ, England
Phone: +44 (0)114 294 2200
Fax: +44 (0)114 294 2211
Email: info@cwfletcher.co.uk

Name of distributor/agent in Japan:
Mr Noriyuki Ueno
Fuji Industries Co Limited
Address: London Branch, 2628 Hammersmith Grove, London, W6 7BA, England
Phone: +44 (0) 20 7938 2088
Fax: +44 (0) 20 7938 3688
Email: n.ueno@ficldn.co.uk
We cover everything from project finance through design and construction, to life-time asset management. Our mission is to make tomorrow a better place and our vision is to be the leader in delivering integrated solutions for infrastructure, buildings and services.

Carillion plc

Brief Organisation profile
Carillion plc is one of the UK’s leading construction and support services organisations, employing around 50,000 people. Formed following a demerger of Tarmac plc in 1999, Carillion has gone on to acquire further well-known companies including Mowlem (acquired in 2006) and Alfred McAlpine (acquired in 2008).

Carillion has annual revenues in excess of £5bn and operations across Britain and in Europe, Canada, the Middle East and North Africa. We have a portfolio of award-winning work in areas vital to society: nuclear, defence, education and regeneration, power, utilities, road and rail. From first concept through design to construction, commissioning, facilities management, operational support and decommissioning, we provide safe, high quality, cost effective and sustainable solutions, tailored to the needs of our customers.

Main products/services or technologies
Civil and structural engineering and construction; building construction; project and programme management; energy services; facilities management; mechanical and electrical engineering; utility services; rail engineering; civil, structural and architectural design.

Experience/results, past clients
The companies that have become Carillion include:
- 2012 – Olympic Media Centre, London, UK
- 2009 – Yas Marina Hotel, Abu Dhabi
- 2007 – Channel Tunnel Rail Link to St Pancras, London, UK
- 2007 – Vancouver International Airport Domestic Terminal Expansion, Vancouver, Canada
- 2001 – Grand Mosque, Muscat, Oman
- 1994 – Channel Tunnel, UK-France
- 1984 – Thames Barrier, London, UK
- 1946 – Heathrow Airport, London, UK

Carillion and its antecedents have been involved in the nuclear industry since the 1950s; from the construction of Chapelcross, Hunterston A and Trawsfynydd Magnox Power Stations to numerous recent projects in support of the UK Nuclear Decommissioning Authority’s mission.

Centronic Ltd

Brief Organisation profile
Centronic was founded in 1945 and is an established detector manufacturer now employing over 125 staff in the UK and a turnover of £10 million. With a clear agenda for growth and now approaching its thirteenth anniversary as an independent company, Centronic continues to grow whilst further consolidating its already strong position as a market leader in niche engineering for the nuclear industry.

Main products/services or technologies
Centronic produces a comprehensive range of standard products that includes neutron detectors, Geiger-Muller tubes, CCT vision systems, silicon photodiodes, electromagnetic wound components and machining services.

Centronic is highly accomplished in the design, manufacturing, test and qualification of gas-filled radiation detectors for the nuclear related industries. Centronic develop integrated radiation tolerant vision solutions for nuclear and other hazardous and safety critical applications, to suit specific customer needs.

We are one of the leading detector suppliers for the world’s power generation, industrial OEM, medical, aerospace and defence applications.
Providers of specialist consultancy services and project services for safety critical systems and process control solutions

CSE-Controls Limited

Brief Organisation profile
CSE Global Limited is an international technology group with over 1700 employees worldwide and turnover in excess of £250million. With a network of over thirty offices in twenty countries, spanning the Americas, Asia Pacific, Europe, Middle East and Africa, our qualified and technical staff operate across a number of markets including industrial automation, telecommunications, environmental and healthcare. CSE Controls were acquired in April 2000 and are widely acknowledged as a market leader providing Safety Systems, Protection Systems and Control Systems for the nuclear, energy, oil and gas and utilities industries. Led by our team of industry experts, our specialist nuclear consultancy team of SQEP personnel provide safety design and assurance of safety and safety related systems equipment and nuclear safety case support services. Our Systems Integration specialists cover the full range of project services from conceptual design, front end engineering and design (FEED) studies, design, manufacture and factory acceptance testing through installation, commissioning and post-handover activities to on-going operational support, enhancements and obsolescence management.

Main products/services or technologies
Consultancy
• Independent design substantiation of safety and protection applications
• Independent design review of safety and protection applications
• Safety integrity level (SIL) calculation and assessment review in accordance with IEC 61508/IEC 13849
• Sellafield EG90, EDF Modest Integrity guide (MIG) for Programmable Electronic Systems (PES) equipment advice and assessment
• EMPHASIS SMART device assessment
• Failure modes effects analysis and failure modes effects and diagnostics analysis (FMEA/FMEDA) Studies
• Independent equipment validation and verification
• Embedded systems design and advice for Safety and Safety Related applications, including Software, Hardware and Complex Electronic Systems - Field Programmable Gate Array (FPGA), Programmable logic device (PLD) etc.
• Safety Case Support including Safety Case Improvement Plans (SCIPs)
• Control systems obsolescence strategy, management, advice and support
• Bespoke and specialist hardware and software design including re-engineering substantiation

Experience/results, past clients

Management, Advisory and Engineering Expertise - Solving tomorrow’s problems today

DBD Limited

Brief Organisation profile
DBD is a UK-registered, independent company providing innovative solutions to complex management, technical and engineering issues focused on highly regulated industries (particularly Nuclear). Our success since launch in 2004 has been built on the quality of our delivery to our clients, provided by our management and technical expertise. The consistent high quality delivery has led to the establishment of trust based, long term relationships with our clients. Today, our specialists operate across many major processing and power sites, including key nuclear sites in the UK. We also provide services to clients and partners in North America, Europe, Japan and South Africa. A key differentiator for DBD is our dedication to building a clear understanding of the client’s requirement, their objectives and success criteria.

Main products/services or technologies
Management Advisory
DBD provides management advisors with an impressive proven track record in strategic and business leadership. Using DBD developed processes, we provide our clients with high quality, transparent and auditable solutions. We deliver:
• Strategy Development - Business and Technical
• Risk Identification and Resolution
• Decision Making Support
• Safety, Security and Environmental Management
• Commercial Management
• Technical Peer Reviews
• Leadership Development

Engineering Solutions
DBD has an outstanding track record in providing conceptual and detailed engineering expertise to deliver robust solutions. We deliver:
• Front End and Systems Engineering
• Whole Life Cycle Design Packages
• Process Simulation and Operational Models
• Safety Case, Safety Case Integration and Regulating Compliance
• The Full scope of Inactive and Active Commissioning and Pre-Operations Management

Experience/results, past clients
Our clients and projects, past and present, include:
• Sellafield Ltd, UK – Commissioning Management of HA Evaporator D NDA, UK – Review of UK Spent Fuel Management Strategy
• Sellafield Ltd, UK – post-Fukushima resilience assessment and development of Severe Accident Management Strategy
• Magnox, UK – Review of Wet Waste Storage, Trawlguyd
• AWE, UK – Review of Design, Technology and Engineering of Major Projects
• ITER, France – Selection of appropriate technology for fuel plant process simulation
• Sellafield Limited, UK – Implementation of Readiness Level (TRL) Process
• Jacobs, UK – Review of Commissioning Programme for AWE UK
• WRPS, USA – Review and selection of appropriate technology for Vitrification process
Supporting our clients in the development of safe, sustainable and economically achievable solutions for radioactive waste management

Eden Nuclear and Environment Limited

Brief Organisation profile
Eden Nuclear and Environment was established in 2007 to provide consultancy and management services within the nuclear sector and for users of radioactive materials. Our aim is to support our clients in the development of safe, sustainable and economically achievable solutions for radioactive waste management. The experience of our seven-strong team encompasses support to operational and decommissioning nuclear sites, new nuclear build utilities and radioactive waste disposal. We also work extensively with regulators, government organisations and international advising bodies. Our approach is to work in close partnership with our clients, providing a high level of technical excellence through cost effective and targeted delivery programmes.

Main products/services or technologies
Our experience extends to decommissioning, radioactively contaminated land assessment, radiological impact studies, assessments of radiological impact, biosphere assessments for humans and non-human biota and decontamination and clearance and exemption. We develop strategies for the management of contaminated land and radioactive wastes. Our staff have extensive experience of managing and contributing to safety assessments at the UK’s Low Level Waste Repository and for the UK Geological Disposal Facility. We have undertaken specialist assessments for Posiva in Finland and SKB in Sweden. We deliver a wide range of radiological risk assessments relating to the management of land with radioactive contamination. This covers civil nuclear and defence sites - both in the UK and internationally. We support UK nuclear industry in decontamination assessments under the Energy Act, ALARP reviews and provide technical review for investigative programmes and remediation. We are accredited to ISO 9001:2008 as specialists in the assessment of radionuclide impacts to the environment and the management and disposal of radioactive waste.

Experience/results, past clients
Eden Nuclear and Environment is working internationally with a wide range of radioactive waste operators and regulators including NUMO and JANS (Japan), the IAEA (Vienna), Posiva (Finland), SKB (Sweden), NWMO (Canada), ANDRA (France) and NPIA (Norway). In the UK we are working with clients such as Sellafield Ltd, URENCO UK Ltd, Energy Solutions (EU) Ltd, LWR, Magnox Ltd, DSRL, IRGRL and NDA RWMD. Eden also provides the Technical Secretariat for the BIOPROTA (www.bioprota.com) international forum.

Manufacturers of ball valves and automation packages for the nuclear industry
Actuators

FLOWSERVE FLOW CONTROL UK

Brief Organisation profile
Became part of the Flowserve Corp. in 2002.
No. of employees approx. 250

Main products/services or technologies
Flowserve Flow Control UK (Worcester) have supplied valve and actuation packages to all the nuclear power plants in the UK and other sites in Finland, Sweden, China and Argentina.
Past clients have included Areva, Westinghouse and EDF.

Experience/results, past clients
Flowserve Flow Control UK (Worcester) have supplied valve and actuation packages to all the nuclear power plants in the UK and other sites in Finland, Sweden, China and Argentina.
Forth Engineering Cumbria (LTD) prides ourselves in being multi discipline solution providers as well as being nuclear innovation specialists.

Brief Organisation profile
Forth Engineering was set up in the year 2000 and since, has supplied fluid components for local and international firms around the globe. We offer a tailor-made consultancy service for hydraulic, pneumatic and vacuum solutions.

Recently an expansion to the company has developed in the form of a nuclear research and development facility paramount in meeting customer needs and demands.

We pride ourselves with the specialized and qualified team we have here at Forth Engineering and our 18 employee members are one of the key attributes to our success.

Main products/services or technologies
Forth Engineering (Cumbria) LTD’s capabilities include:

- Electrical / CEI Engineers
- Design & 3D CAD engineers
- Welding & fabrication
- Fluid power consultants
- P4 Pass and classified workers with SC Clearance
- SL Security approved Site Quality grade audited to SL QG 04/03 and 02
- ISO 9001-2008
- New to December 2012: Deep recovery facility
  - Purpose built sectional replica of LP 6 x wet bays (This is a 30Mtr x 10Mtr x 6Mtr Deep fully wetted pond facility including furniture, housed in a 50Mtr x 30Mtr x 8Mtr High Building boasting a 15Tonne Wellman & Booth Nuclear grade gantry crane)
  - Now for September 2012 18Mtr X 10Mtr x 4Mtr Big hall with a 3M 3 Wetted pond facility boasting a 3T Overhead crane

Experience/results, past clients
Forth Engineering (Cumbria) LTD have had experience working successfully with a range of customers, both in the UK and internationally which include influential companies like Sellfield LTD, Shepley Engineering, Doosan Babcock and EDF Energy to name a few.

Galson Sciences Ltd

Brief Organisation profile
Galson Sciences Limited (GSL) is registered in England and Wales under registration number 2738897. GSL’s head offices and registered offices are located at 5 Grosvenor House, Melton Road, G其他地名, ME5 6AE, UK. The Managing Director is Dr. Daniel A. Galson, who should be contacted with any questions concerning the company’s corporate or financial data. GSL has no parent company and no group companies.

GSL’s annual gross turnover in 2012 is expected to be £2,700,000. We have 20 staff, of whom 17 are consultants. Our contracts range in value from projects requiring several days effort to projects running over many years and having values of several millions of pounds. We currently have about 50 contracts running at any one time, and will be working on about 100 different contracts this year.

Main products/services or technologies
- Safety case development
- Safety and risk assessment
- Disposal system concept development and assessment
- Waste packaging assessment
- Detailed modelling studies
- Nuclear criticality safety assessment
- Contaminated land analyses - Disposal
- Biological processes
- Geographical characterisation and modelling
- Hydrochemical characterisation and modelling
- Contaminant chemistry and transport
- Gas generation and migration
- Thermo-hydro-mechanical analysis
- Monitoring plans and programmes
- Data management

Radioactive Decommissioning Support
- Cost forecasts and analyses
- Decision analysis and option studies (BPEO/BPRAT)
- Information and Document Management
- Lifecycle management of radioactive wastes and materials
- Management consulting
- Radioactive Waste Management

Experience/results, past clients
Japanese clients: Nuclear Waste Management Organisation (NUMO)
- Japan Atomic Energy Agency (JAEA)
- Japan Nuclear Fuel Cycle Development Institute (JNC)
- Nuclear and Industrial Safety Agency (NISA)
- Japan Nuclear Energy Safety Organization (JNES)
- JNC, Nuclear Technology Institute (JANT) Institute of Nuclear Safety Systems (INSY)
- Radioactive Waste Management, Funding and Research Center (RWM)
- Kajima Corporation
- Japan RUS Company (JAMS)
- Mitsubishi Corporation (MC)
- Japan Gasoline Corporation (JGC)
- Selected other clients:
  - IAEA, OECD/NEA, EC, WHO
  - NDA, RWMD, DISRL, Magnon Limited, Environment Agency (UK)
  - ANDRA, CEA, ASN, IRSN (France)
  - SKB, SSM (Sweden)

Selected other clients:
- IAEA, OECD/NEA, EC, WHO
- NDA, RWMD, DISRL, Magnon Limited, Environment Agency (UK)
- ANDRA, CEA, ASN, IRSN (France)
- SKB, SSM (Sweden)
- NDA, RWMD, DISRL, Magnon Limited, Environment Agency (UK)
- ANDRA, CEA, ASN, IRSN (France)
- USDOE, NNSA, Westinghouse (US)
HESCO, the original and global choice for rapidly deployed barrier systems

**HESCO Bastion Ltd**

**Brief Organisational Profile**

HESCO Bastion, founded in 1991, is an innovator and world leader in the design, development and manufacture of barrier systems that provide protection for people, property and places. It currently operates from five locations based in the United Kingdom and the United States, with approximately 200 employees.

**Main Products/services or technologies**

HESCO barriers were initially designed as an innovative method of addressing soil stabilization problems, soon after their invention the military potential for the product was identified by the British Army and immediately deployed to protect personnel in the Balkans Conflict. The US military, having seen the effectiveness of HESCO walls, began deploying Concertainer units for camp and asset protection. From this time the US and UK militaries have been major customers and advocates for HESCO barriers.

HESCO products have developed from being just a military protective barrier into a globally recognized application for disaster management, protecting critical infrastructure from hurricanes, tropical storms and floods and has become an effective solution for homeland security requirements.

**Experience/results, past clients**

HESCO has worked with governments and civilian organizations around the world providing solutions for:

- Perimeter protection of AWE & Sellafield Nuclear facilities, UK
- Protective at Faslane and ClydeRose Nuclear facilities, Scotland
- Insurgent attacks against Exxon Mobil, West Qurna oilfield in Southern Iraq
- Securing the Dim Daeung Highway during the 2011 flooding
- Temporary perimeter fencing and shelters for United Nations projects
- Perimeter protection at Boeing, Washington State, USA
- Environmental remediation at Port Fourban Beach during Gulf of Mexico oil spill
- Perimeter fencing to secure the United Kingdom’s National Grid
- Accommodation compound perimeter security, Canadian Nexen Oil Company, Yemen

**Products and Services**

- Decommissioning
- Environmental remediation
- Waste management
- Site restoration
- Site Security

**Company Information**

**Website address:**

www.hesco.com

**Address:**

Unit B, Molasses House, Plantation Wharf, London, SW11 3TN

**Phone:**

+44 207 350 5454

**Fax:**

+44 207 350 5434

**Email:**

Shaun.ellis@hesco.com

**Name of distributor/agent in Japan**

Nippon Tokuso Co. Ltd

**Address:**

Leflaxuss Hirakawa-cho Bldg 1-9-9 Hirakawa-cho Chiyoda-ku, Tokyo 102-0093

**Phone:**

+81 3 3288 3339

**Fax:**

+81 3 3288 3359

**Email:**

info@tokuso.co.jp

---

HR Wallingford provides world leading analysis, advice and support in engineering and environmental hydraulics for the nuclear power industry

**HR Wallingford**

**Brief Organisational Profile**

HR Wallingford has operated as an independent organisation with a unique combination of knowledge, assets and facilities all on one site at our head office in the UK. Facilities include physical modelling laboratories, a full range of computational modelling tools, world leading ship simulation centre and above all expert staff with world renowned skills and experience.

Today HR Wallingford Ltd has a 60 year track record of achievement in applied research and specialist consultancy with 265 staff, reaching clients and partners globally through our network of offices, agents and alliances around the world.

**Products and Services**

- Decommissioning
- Environmental remediation
- Waste management
- Site restoration
- Site Security

**Company Information**

**Website address:**

www.hrwallingford.com

**Address:**

Howbery Park, Wallingford, Oxfordshire OX10 8BA, United Kingdom

**Phone:**

+44 (0)1491 835381

**Fax:**

+44 (0)1491 832233

**Email:**

info@hrwallingford.com

**Products and Services**

- Decommissioning
- Environmental remediation
- Waste management
- Site restoration
- Site Security

**Company Information**

**Website address:**

www.hrwallingford.com

**Address:**

Howbery Park, Wallingford, Oxfordshire OX10 8BA, United Kingdom

**Phone:**

+44 (0)1491 835381

**Fax:**

+44 (0)1491 832233

**Email:**

info@hrwallingford.com

**Experience/results, past clients**

HR Wallingford has been helping clients address the engineering challenges of the nuclear industry for 50 years. We were involved in the planning of the first generation of British nuclear power plants in the early1960s and are now assisting in their decommissioning and the planning of the next generation. Our expert staff have worked on projects at all British nuclear power plant sites, including Magnox, AGR, PWR and BWR technologies, and have worked on a range of international nuclear power projects. Our clients include Chiyoda, Sumitomo, Hitachi Zosen, J Power, Mitsubishi, JGC, Bechtel, KEPCO, EDF, Magnox and British Energy.

**Main Products/services or technologies**

HR Wallingford provides specialist consultancy, design and testing services in civil engineering hydraulics, covering behaviour of water in built and natural systems and the interaction between the two. We deliver effective solutions based on our technology, expertise about the aquatic environment and experience in project requirements. We assess and collate information, construct physical models, set up computational simulations, interpret information in support of the decision making process, and engineer solutions for the nuclear industry. Work is performed under a Quality Management System certified to ISO 9001:2008, and an Environmental Management System certified to ISO 14001:2004. We advise on a number of aspects of decommissioning of nuclear sites, and provide services on field investigation and site assessment, cooling and process water supply and discharge, extreme design conditions, tsunami and earthquake, flood risk and coastal protection; sediment transport and morphological analysis; emergency response; management of plant effluents. We contribute to Environmental Impact Assessments, and represent our clients in consent and planning applications.
ITS, a Sellafield Control Systems Framework Partner designs and implements process control, vision inspection and tracking solutions for the nuclear sector

Industrial Technology Systems Ltd (ITS)

Brief Organisation profile
Established in October 1991, ITS is a leading-edge, independent systems integrator with extensive experience in the design, implementation and support of the following solutions and complementary services in the nuclear sector:

- Management Information Systems
- Process Control Systems
- Project Management & Engineering Services
- Regulatory Compliance Training
- Vision Inspection Systems
- ITS services include everything from FEED and feasibility studies, consulting through to full lifecycle project delivery and 24/7 system support.

ITS engineers are passionate about understanding each customer’s needs, to ensure that the team delivers solutions that meet expectations and do exactly what’s required.

With accreditation to BS EN ISO 9001:2008 and ISO 14001:2004, ITS is a member of the Sellafield Controlled Systems Framework and has been working with Sellafield for over 16 years. ITS has extensive experience working both to Sellafield Ltd’s internal requirements, including IEC61508 and IEC61511, and IEC61508 standards; customers can be confident in the quality of ITS’ services.

Experience/results, past clients
ITS has been actively involved in the nuclear industry for over 16 years. Having successfully completed over 100 projects for Sellafield Ltd, National Nuclear Laboratory, Magnox (Wylfa), Sizewell and Oldbury, ITS has extensive experience working both to Sellafield Ltd’s internal requirements, and other industry standards including IEC61511 and IEC61508.

Examples of testimonials received:
- Good customer/client relations and customer focus. Very competent and capable.” Sellafield Ltd
- Excellent response to queries, following project implementation.”
- Great cooperation; good communication. Good assistance.”
- Excellent communication. Good cooperation; very competent.”
- Excellent attention to detail; great cooperation; very competent and capable.”
- Excellent communication. Good cooperation; very competent and capable.”
- Overall a most demanding project environment.”

Main products/services or technologies
ITS designs, implements and supports a range of real-time IT and industrial control solutions and offers a range of complementary services to the nuclear sector including:

- PLC and SCADA systems
- DCS systems
- IEC-61508 / 61511 / 61513 compliant safety systems
- Non-contact vision inspection systems
- Radiation tolerant camera solutions
- Management information systems
- Fuel tracking solutions
- Database solutions

Products and Services
- Decommissioning
- Decontamination
- Decommissioning (POCO)
- Decontamination (Non-Nuclear)
- Waste management
- Waste disposal (Thermoelectricity)
- Site restoration
- Decommissioning and Post-Demolition
- Environmental remediation land / ground
- Post-clean-up release surveys

Company Information
Website address: www.its-ltd.co.uk
Address: ITS House, High Force Road, Riverside Park, middlesbrough, TS2 1LR
Phone: +44 (0)1642 222233
Fax: +44 (0)1642 222216
Email: m-taylor@its-ltd.co.uk

Land Quality Systems (and related services) for collecting, managing and analyzing ground contamination data and supporting land clean-up and remediation

Informed Solutions

Brief Organisation profile
Informed was founded in 1992, and is an independent professional services and systems integration practice.

We have 20 years experience in the energy industry, where we have worked with global oil majors, national electricity generators and distributors, and nuclear waste and reprocessing sites.

We provide a range of specialist services and systems to the energy industry including land quality and asset management, regulatory licencing, workflow automation and case management. Informed have some 20 consultants in our energy practice and a broad network of specialist alliance partners and associate subject matter experts.

We are a privately held business, operating in the UK and globally and have won a number of prestigious national and international awards.

Products and Services
- Decommissioning
- Decontamination
- Waste management
- Site restoration
- Decommissioning and Post-Demolition
- Environmental remediation land / ground
- Post-clean-up release surveys

Company Information
Website address: www.informed.com
Address: The Old Bank, Old Market Place, Altrincham, Cheshire, WA14 4PA, UK
Phone: +44 (0)161 942 2000
Fax: +44 (0)161 942 2015
Email: David.Chapman@informed.com

Experience/results, past clients
Sellafield Ltd (Europe’s largest nuclear reprocessing site)
We have provided a Land Quality System to manage a 60 year legacy of land contamination from nuclear activity, that is being used to clean-up the Sellafield nuclear site. The system manages over 700 types of groundwater and soil contamination data over a 48 year period, and seamlessly integrates information from 8 different systems.

Shell Retail International (International Fuel Retail division of Shell)
We have provided Land Quality Systems to manage hydrocarbon contamination of land and clean-up activities at Shell’s fuel retailing sites in some 40 countries worldwide.

Main products/services or technologies
Informed provide project consultancy, solution delivery and on-going support in a number of specialist areas across the energy industry, including:

- Land Quality and Land Remediation Management Professional Services and Systems
- Asset Management Professional Services and Systems
- Spatial, Location & Geographic Information Professional Services and Systems
- Information & Knowledge Management Professional Services and Systems
- Consultation & Collaboration Professional Services and Systems
- IT & Geospatial Estate Assessment Services
- Service Integration and Management (SIAM)
James Fisher Nuclear is an established supplier of specialist engineering, manufacturing and technical services for applications within challenging environments or with high integrity requirements.

**Products and Services**
- Decommissioning
- Decontamination
- De-energising & demolition
- Waste management
- Waste processing, conditioning & passivation
- Waste storage & transportation
- Waste disposal (shredding / reprocessing)
- Site restoration
- Modular systems
- Decommissioning clean-out (POCO)
- Wasteland development
- Wasteland remediation & material recovery
- Environmental remediation & post-closure

**Company Information**
- Website address: www.jfnl.co.uk
- Address: Golden Hill Centre, School Lane, Leyland, Preston Lancashire PR25 2TU
- Phone: +44 (0) 1772 622455
- Email: contactus@jfnl.co.uk

**Main products/services or technologies**
- ROV Plant and Waste
- Characterisation
- Modular Systems
- Remote Handling

**Experience/results, past clients**
- JFN has experience of working successfully with a range of customers across the UK. In recent years, principal customers have included, Sellafield Ltd, DSRL, Babcock, AMEC, Westinghouse, EDF Energy, UK Nuclear Decommissioning Authority, AWE, Energy Solutions, LLWR and Rolls Royce.

JGC is one of the UK’s leading engineering companies. We have the breadth and depth of technical expertise to respond to the complex challenges of major engineering projects.

**Products and Services**
- Decommissioning
- Decontamination
- De-energising & demolition
- Waste management
- Waste processing, conditioning & passivation
- Waste storage & transportation
- Waste disposal (shredding / reprocessing)
- Site restoration
- Modular Systems
- Decommissioning clean-out (POCO)
- Decontamination
- De-energising & demolition
- Waste management
- Waste processing, conditioning & passivation
- Waste storage & transportation
- Waste disposal (shredding / reprocessing)
- Site restoration
- Modular systems

**Company Information**
- Website address: www.jgc.co.uk
- Address: JGC House, Janetstown, Thurso. Scotland KW14 7XF
- Phone: +44 (0)1847896767
- Fax: +44 (0)1847891448
- Email: info@jgc.co.uk

**Main products/services or technologies**
- JGC has the skills, knowledge and proven experience to plan, design, manufacture and implement the solutions to complete the project. Since its start in 1972 we have grown the business beyond local engineering services to a respected national and international manufacturer and supplier of quality assured engineering services. Building on our skills in mechanical, electrical, controls and instrumentation allows us to meet the needs of today’s nuclear, energy and utilities markets and their demands for tomorrow. JGC has a unique skill set and comprehensive facilities allowing us to complete unique projects from conception to operations without the requirement to sub-contract.

**Experience/results, past clients**
- Dounreay Site Restoration Ltd – D1208 Ventilation Project, D1207 Decommission & Demolition
- AMRR Alliance Projects including Sodium Disposal
- Babcock – Various Projects including Nuclear Submarine Breakfall
- Magnix Ltd – Secondary Containment
- Vessel Manufacture for LLWR
- AWE – Various Projects
- Rolls Royce – Retention Nuts and Covers for Submarine Propulsion Units
- Onset Group – Fuel Bundling Handling Equipment For Ignalina Power Plant

**Directory of UK Decommissioning Technologies and Capabilities – Proven in the UK and overseas**
A market leader in decommissioning, demolition and land remediation, prioritising safe delivery and helping our customers realise value from their assets

KDC Contractors Limited

Brief Organisation profile
KDC has developed immeasurably from its initial inception in 1990 and now has a workforce of 150 people. We provide competitive decommissioning services including strategy development, hazard characterisation, decontamination (asbestos, radiological and chemotoxic), de-planting, asset appraisal and disposal, demolition and land remediation. We serve the nuclear, energy and natural resources, process, pharmaceutical, utility and industrial markets, mainly in the UK and Ireland. Customers include Sellafield, Magnox, AWE, Research Sites Restoration Limited, BP, Chevron, Total, Dow, Croda, GSK, AstraZeneca, EDF and Scottish & Southern Energy. These “blue-chip” clients demand enacting SHE, Financial, Operational and Corporate Social Responsibility performance. KDC has many long term relationships with these companies proving we continue to deliver exemplary performance.

“The safe and sustainable delivery of our operations is one of KDC’s core principles. My commitment is to ensure every one of our employees returns home safely at the end of every working day.”

Ian Smithson, Managing Director

KDC serves the nuclear, energy and natural resources, process, pharmaceutical, utility and industrial markets, mainly in the UK and Ireland. We are a privately owned company, financially secure with management and a global investment bank as main shareholders. Our focus is exemplary Safety, Health and Environmental (SHE) performance to protect our own and our customers’ people and other stakeholders. We are not complacent and constantly strive to improve. We are proud of our core values, honesty, loyalty, professionalism, commitment and respect.

Main products/services or technologies
KDC specialise in delivering “end of asset life” and land remediation solutions. KDC provide competitive decommissioning services including strategy development, hazard characterisation, decontamination (asbestos, radiological and chemotoxic), de-planting, asset appraisal and disposal, demolition and land remediation.

Land and Marine Project Engineering Limited

Brief Organisation profile
Land & Marine has a wide business portfolio that includes energy, power and process plant, storage tanks, pipelines and trenchless technology as well as our traditional marine business. Founded in 1953 and based in North West England, the Company currently has a total workforce of 474, and Capital of circa £10m. With our group company Land & Marine Protech, based in Inverclyde near London, we can provide conceptual and front-end engineering and design (FEED) services for oil, gas and process projects.

Land & Marine is an innovative company. Our flexible approach to working with clients enables us to provide optimum solutions. We are large enough to undertake substantial projects whilst retaining an intimate client contractor relationship. We develop techniques and equipment to suit the task in hand, and with a long and impressive history of successful projects behind us, we are always looking to build on this experience. One recent innovative solution was development of an underwater tracked ROV to detect and recover radioactive contaminated particles from the sea bed.

Experience/results, past clients
Our customers come from a wide range of sectors including Nuclear, Energy and Natural Resources, petrochemical, pharmaceutical, utilities, the public sector, manufacturing and heavy industrial. Over the last 20 years KDC has delivered large and small projects for these customers: Aesica / AWE / Boots Land Lease / BP / Chevron / ConocoPhillips / Croda / Doureag (DSRL) / Dow Chemicals / ESB / ExxonMobil / GE Healthcare / ING / Mgways / RSRL / Royal Mail / RWL / npower / St Michael / Scottish Power / Sellafield Ltd / Semishep / Solutia / SSE / Syngenta / Wales & West Utilities

Experience/results, past clients
The Company generally works for Blue Chip type companies in the Oil Gas and Energy sectors. Major clients include National Grid, Scottish & Southern Energy, RWE, Centrica, BP, Shell, EON, Nuclear Decommissioning Authority, Perenco, Heathrow, Gatwick & Manchester Airports. Major works undertaken in the UK, include decommissioning 3 sub sea radioactive contaminated pipelines for British Nuclear Fuels at Sellafield, removal of radioactive contaminated particles from the sea bed for the Nuclear Decommissioning Authority, 203km of 1200mm dia pipeline in the UK, and 3 gas compressor stations in the UK all for National Grid.

Products and Services
Decommissioning
• Post-operational clean-out (POCO)
• Decontamination
• Waste management
• De-energising & demolition
• Site restoration
• Environmental remediation
• Toxic waste management
• Waste storage & transport
• Post clean-up release surveys

Products and Services
• Engineering and consultancy services
• Fabrication services
• Horizontal directional drilling and auger boring
• Land pipelines, HV cabling and aviation refuelling
• Marine pipelines and cables for offshore wind farms
• Specialist marine operations, including nuclear decontamination subsea
• Equipment Hire Services
• Storage tanks, seals and services

Company Information
Website address: www.kdc.co.uk
Address: 1 Robson Way, Manchester, M22 4SW
Phone: +44 (0)161 947 2150
Fax: +44 (0)161 947 2160
Email: Rachelle.tomlinson@kdc.co.uk

Company Information
Website address: www.landandmarine.com
Address: Dock Road North, Bromborough, Wirral, CH62 4LN
Phone: +44 151 641 5600
Fax: +44 151 644 9990
Email: company@landandmarine.com

Main products/services or technologies
• Energy, power, process plant and renewables

Main products/services or technologies
• Energy, power, process plant and renewables
• Engineering and consultancy services
• Fabrication services
• Horizontal directional drilling and auger boring
• Land pipelines, HV cabling and aviation refuelling
• Marine pipelines and cables for offshore wind farms
• Specialist marine operations, including nuclear decontamination subsea
• Equipment Hire Services
• Storage tanks, seals and services

Website address: www.landandmarine.com
Address: Dock Road North, Bromborough, Wirral, CH62 4LN
Phone: +44 151 641 5600
Fax: +44 151 644 9990
Email: company@landandmarine.com

Main products/services or technologies
• Energy, power, process plant and renewables

Main products/services or technologies
• Energy, power, process plant and renewables

Directory of UK Decommissioning Technologies and Capabilities – Proven in the UK and overseas
"Life Matters"

**Lloyd's Register / Scandpower**

**Brief Organisation profile**
Since 1760, Lloyd's Register has worked to enhance the safety of life, property and the environment with currently about 8,000 staff in 200 countries. We have provided independent assurance and verification services to the nuclear industry for over fifty years, and have been involved with many major nuclear projects worldwide. We are one of the largest independent consultancy companies providing risk management services to the nuclear power industry, and more than 50% of the world's nuclear power plants are using our RiskSpectrum® risk management software. Scandpower, a wholly owned subsidiary of Lloyd's Register, performs quantitative risk analysis (QRA), a key element for safety management and risk control throughout design, construction, operation and decommissioning related to life and environment, market, contractual or regulatory requirements.

**Main products/services or technologies**
- Systems, Structures, and Component Risk Assessment, Natural Hazard Risk Assessment, Third Party Inspections; Design Review; Independent Peer Review; Human Reliability Assessment; Risk Software Development; Reliability, Availability, Maintainability Analysis; Probabilistic Safety Assessment; Environmental Impact Studies
- Decommissioning
- Decontamination
- Dismantling
- De-energising & demolition
- Waste management
- Waste disposal (tomboling / repository)
- Site restoration
- Decontamination & decommissioning
- Interim remediation and graduated
- Post clean-up release surveys

**Products and Services**
- Decommissioning
- Decontamination
- Dismantling
- De-energising & demolition
- Waste management
- Waste disposal (tomboling / repository)
- Site restoration
- Decontamination & decommissioning
- Interim remediation and graduated
- Post clean-up release surveys

**Company Information**
- Website: www.lr.org
- Website: www.scandpower.com
- Website: www.risksppectrum.com
- Address: 9th/10th Floor 2-3-1, Minatomirai-Nishi-ku, Yokohama, 220-6010, Japan
- Phone: +81 (0)45 682 5271
- Fax: +81 (0)45 682 5253
- Email: yokohama-energy@lr.org
- Phone: +44 113 223 8200
- Fax: +44 113 223 8201
- Email: ben.lerner@logicalps.com
- www.logicalps.com
- www.scandpower.com
- www.9th/10th Floor 2-3-1, Minatomirai-Nishi-ku, Yokohama, 220-6010, Japan
- Phone: +81 (0)45 682 5271
- Fax: +81 (0)45 682 5253
- Email: yokohama-energy@lr.org
- Phone: +44 113 223 8200
- Fax: +44 113 223 8201
- Email: ben.lerner@logicalps.com

**Logical Personnel Solutions Limited**

**Brief Organisation profile**
Logical Personnel Solutions are a supplier of recruitment services into the Nuclear industry, decommissioning, power generation, new build, waste and defense. We have the capabilities to mobilize highly skilled teams within 48 hours worldwide. Logical also have a flexible vetting team working to various standards including SC, CTC, DV, EDF etc. We can integrate our standards if need be.

**Experience/results, past clients**
- Logical work with EDF new build and generation, the British NDA Fleet, Alstom, Mott Macdonald, Aldermaston, Atkins, Horizon, Eon, Iberdrola, Balfour, Siemens, Doosan Babcock and many more. (Testimonials are available)
- We have worked within New build, Maintenance, shut down and outage, design, consultancy, decommissioning, civils, emergency works, waste and defense.

**Main products/services or technologies**
- We are a specialist recruitment and manpower provider working within the Nuclear industry specifically decommissioning, build, maintenance, waste, design, consultancy and defense. Operating from the UK we tailor our service to our clients and mobilise staff globally, offering contingency and permanent recruitment solutions. Through our comprehensive database we can source suitably qualified, experienced personnel from all over the world utilizing our internal resourcing and vetting team.
- Our candidates range from blue collar build specialists, through to safety case authors, design staff, project management, consultants and more.
- In the UK we partner with Radiation Protection Advisors (RPA) to provide all dosimetry information on all of our labour prior to deployment. We work to permanent requirements and both forecasted and emergency projects.

**Products and Services**
- Decommissioning
- Decontamination
- Dismantling
- De-energising & demolition
- Waste management
- Waste disposal (tomboling / repository)
- Site restoration
- Decontamination & decommissioning
- Interim remediation and graduated
- Post clean-up release surveys

**Company Information**
- Website: www.logicalps.com
- Address: Tower North Central, Merrion Way, Leeds, LS2 8PA
- Phone: +44 113 223 8200
- Fax: +44 113 223 8201
- Email: ben.lerner@logicalps.com
Global Specialist in Radiological Protection and Decontamination

Matom Ltd

Brief Organisation profile

Established 1999 in northwest Wales, Matom have grown to become one of the UK’s top providers in operational and consultancy radiological protection, in addition to providing a diverse range of services into non-nuclear sectors around the world.

Matom are providers of a bespoke decontamination process. TechXtract®, that helps organisations meet the environmental challenges of reducing volumes of radioactive and chemical (e.g. PCBs) wastes. This is a global service that has current applications in the nuclear sector, ship-breaking, chemical process legacy sites, oil and gas, pharmaceuticals, and turbine cleaning.

Main products/services or technologies

- Decommissioning
- Radiological Protection
- Health Physics
- Decommissioning

Experience/results, past clients

- Tier 2 supplier to UK nuclear industry
- Worldwide operator of TechXtract®
- Responsible for decontamination and cleanup following UK’s only civilian CBRN incident
- Represent the UK government to the European Committee for Standardisation/Technical Committee (CEN/TC) for matters concerned-chemical, biological, radiological, and nuclear (CBRN) incidents.
- Represent the Society for Radiological Protection (SRP) to the British Standards Institute (BSI) as part of the Societal Security Management Committee (SSM/1)

Products and Services

- Decontamination
- Decommissioning
- Waste management
- Site restoration
- Environmental remediation (land & groundwater)
- Waste disposal (ruminating repository)
- Post clean-up release surveys

Company Information

Website address: www.matom.com
Address: Inter, Parc Menai, Bangor, Gwynedd, LL57 4FG
Phone: +44 (0)1248 672617
Email: mark@matom.com

Provider of scientific and technical support on all aspects of radioactive waste management to governments, NGOs, regulators and implementers

MCM International

Brief Organisation profile

MCM International, founded in 2006, brings together a team of consultants with unique international strategic, scientific and technical experience in radioactive waste management.

The three partners, Dr Charles McCombie, Professor Neil Chapman and Dr Ian McIntyre, have each been involved for over 35 years in planning, implementing and regulating nuclear waste programmes and projects worldwide. They are complemented by a staff of 6 and an international group of Associates, who bring together a wealth of experience in every field of waste management.

MCM is currently a partnership, with an annual turnover approaching £1 MGBP, which will become a limited company in early 2013.

Main products/services or technologies

Services provide include the development, implementation and review of:

- Strategic planning at national/regional programme level
- Planning tools and databases (inventories, costing, resources)
- Storage and disposal concepts for all kinds of waste in a wide range of settings
- Site selection and characterisation
- Operational and post-closure safety cases
- Decommissioning, cleanup and remediation
- R&D programmes and infrastructure
- Programme management tools & database (requirements, knowledge, technical quality, issues)
- Stakeholder communication and dialogue
- Special technical project (international/multidisciplinary involving tectonics, URLs, analogues)
- Education and training

In addition to the core capabilities listed above, the MCM team has worked in Japan for two decades and recently been supporting JAEA with the decontamination and clean-up work at Fukushima, planning the feasibility assessment of direct disposal of spent fuel and production of a robust safety case for the proposed L1 repository at Rokkasho.
Suppliers of advanced CCTV inspection/surveillance camera systems for the Nuclear Industry

Mirion Technologies (IST) Ltd

Brief Organisation profile
Mirion Technologies has specialized in protecting people, property and the environment for over 50 years - offering a broad range of radiation detection, measurement, analysis and visual systems and services in the nuclear industry.

Mirion operates globally with five divisions: Imaging Systems, Radiation Monitoring Systems, Sensing Systems, Dosimetry Services and Health Physics. Mirion’s products and services are offered to a wide variety of customers including nuclear power plants, military and civil defense agencies, hospitals and universities and national laboratories. With over 700 employees worldwide, Mirion operates 13 production facilities in North America, Europe, and Asia. Our products can be found in more than 90% of the operating nuclear power plants worldwide, 17 of the NATO armed forces, thousands of medical facilities, and many industrial applications.

Main products/services or technologies
The Imaging Systems Division (ISD) offers one of most recognizable brands in the nuclear industry for visual inspection and surveillance needs. The divisional headquarters are located in Farnborough, Hampshire, UK. The Imaging Systems Division designs and manufactures leading-edge CCTV systems for inspection, surveillance and monitoring of difficult and hazardous environments, specializing in viewing systems for the nuclear industry. Mirion is an acknowledged leading supplier of radiation tolerant cameras with industry recognized brands such as IST-Rees.

IST-Rees cameras offer customers a wide range of inspection options. The cameras are equipped with a selection of lenses and lighting attachments, allowing operators the ability to carry out a variety of inspection tasks in both low and high radiation environments. Surveillance within nuclear power plants such as reprocessing, waste management and storage facilities is also an important part of a plant’s operation. Permanently located within the plant and designed to survive hostile environments, IST-Rees cameras are an essential component of the industry’s process control.

Experience/results, past clients
Mirion’s camera systems have been supplied to Nuclear Power Plants, Reprocessing Plants, Waste Handling Plants and used for Decommissioning of Nuclear facilities all around the World.

Past clients include MHI, IHI, JNFL, Toshiba, Westinghouse, GE, Hitachi, US DOE, KHI, KAERI, TPC, CNP, EDF, Sellafield (BNFL) etc.

Large projects in Japan include JNFL RRP AA-facility, where Mirion supplied a system with over 50 cameras via MHI, for monitoring Reprocessing activity. Mirion also supplied inspection cameras for the PRW and BWR programs.

Company Information
Website address: www.mirion.com
Address: 2 Columbus Drive, Southwood Business Park, Farnborough, Hampshire, GU14 0ZN
Phone: +44 (0)1252 375137
Fax: +44 (0)1252 391890
Email: dklaufman@mirion.com

Mon Maintenance Services Ltd (MMS)

Total Maintenance Solutions. MMS are a one stop shop for Mechanical, Electrical, Fabrication and Welding Installation and Maintenance Engineering services

Brief Organisation profile
Mon Maintenance Services (MMS) was set up in 2009 to providing our highly trained tradesmen and services to the local, national and international markets. At present MMS have 12 full time employees and have a database of 200+ fully trained tradesmen of which we call on when required. Each tradesman is chosen specifically to meet the needs of other organizations, trained to that specific sector. MMS have shown consistent growth over the 3 year period with a recorded growth of 320% since inception turning over £500,000 this year. MMS have the backing, and commitment to grow further in our chosen sectors, offering our services to the global market, Nuclear decommissioning being our specialty having been involved with decommissioning at Trawsfynydd Decommissioning site in the UK since 2010.

Main products/services or technologies
With over 170 years combined experience in a wide range of disciplines and sectors of Engineering and Maintenance, we can offer a fully Comprehensive “one stop shop” Engineering Contracting, Sub - Contracting and Supply package - Mechanical, Electrical, Machining and Welding Fabrication all under one banner. MMS work to, and maintain accredited Quality, Health and Safety and Environmental management system certification. Our services include Installation, Faultfinding and repair, periodic inspection and testing, planned and unplanned maintenance services, preventative maintenance packages, production line change outs re-organisation and new production line installation, maintenance service contracts and crews for site support, overhaul and repair, high reach access services (MEWP), hydraulic and pneumatic, Conveyors and conveying systems, Crushers, Gantry cranes, Pumping, Adder boxes, Compressors, valves, induction and extraction fans, shuttering, cladding ducting. MMS have an extensive database of suitably qualified and experienced personnel which we call on when required. Each tradesman is chosen specifically to meet the needs of other organizations, trained to that specific sector. MMS have shown consistent growth over the 3 year period with a recorded growth of 320% since inception turning over £500,000 this year. MMS have the backing, and commitment to grow further in our chosen sectors, offering our services to the global market, Nuclear decommissioning being our specialty having been involved with decommissioning at Trawsfynydd Decommissioning site in the UK since 2010.

Experience/results, past clients
MMS have worked for a number of global companies as main contractors and subcontractors in a number of different sectors. Having experience in Nuclear Decommissioning at Trawsfynydd Decommissioning Site, Defense contracts at RAF Valley, Local and Main Government authority work in North Wales. Our client list includes:

- CAE Inc, Lockheed Martin, Babcock Int, Costain, Amec, Jacobs, Welsh Government, ACTUS BLM, Macro Cable Management, Angelsey Sea Salt, Stenna Line, SMIT International
Multi-Discipline Engineering, Design & Technical Documentation Services to Nuclear, Aerospace, Defense & Power sectors

Morson Projects Limited

Brief organisation profile
Morson Projects has been providing ‘world class’ multi-disciplined engineering, design and project management services for over 25 years to international clients. Established in 1979 with 750 employees and a turnover of £46 million, Morson Projects specialises in the supply of complete Engineering Solutions from Concept design through to Total Project Implementation. Morson Projects has over 710 personnel housed within our modern, fully equipped offices utilising the latest technology. Headquarter are in Manchester with regional offices at Sellafield (On site at B71E U1) & Greenethorpe, Birmingham, Belfast, Bristol, Hull, Bradford, Derby and Belgrade.

- Morson Projects engineering services operate across a variety of industrial sectors giving them the added advantage of bringing to the client ‘best practices’ that have been developed in other industries and together with their own in depth experience in the nuclear industry effects a confidence resulting, inevitably, in financial and programme benefits to the project.
- Morson Projects client base in the nuclear sector includes: Sellafield Ltd, JET, EDF (British Energy), UKAEA & NNL.

Main products/services or technologies
Morson Projects Services include:

- Engineering Solutions / Concept and Detail Design: all disciplines / Analytical Services / Design Substantiation and Verification / Technical Documentation / Manufacturing / Project Management / Scanning Solutions / Site support / Asset Care

- Capability Skills include:
  - Project Management / Mechanical Handling & Tooling Design / Piping design & analysis / Control / Electrical & Instrumentation Design / UXK & Ld & Distribution / Civil, Structural & Architectural Design / Stress analysis / Building Services / Asset Surveying

- Experience/results, past clients
  - Nuclear Sellafield Specific Experience
    - Current Direct SI Agreements:
      - TWI for MEAL value £2m, specifics frameworks include: AMIP, EEP, Magnox, Plant Services, LFLS
      - Site-Wide Technical Documentation Services value £1m, LFLS, Magnox, HAES and Windscale

Typically, Morson Projects are responsible for the coordination and delivery of multi-discipline design work including Mechanical, Electrical & Instrumentation Technical Documentation. Analytical Mechanical Handling, Vessel and Piping Systems, and continuous Asset Care Support for Plant inside and outside the Separation Area at Sellafield site. Task delivery includes the full spectra of Work Pack documentation of complete plant designs to support the Sellafield site Production Facilities, Asset Care requirements and preparation of active and non-active facilities to be ready for Decommissioning at a later date. The NNL design team provide all the documentation associated with Front End Concepts/Detail design for Manufacture together with the necessary supporting documentation for implementation for submission to Plant Modification Procedure approval i.e. drawings, calculations, specifications, method statements, “Construction, Design and Management” risk assessments, schedules and Design Verification Reports etc.

- NNL’s (Pilkingtons) New Glass Float Line Complete Plant Nukal Island development using NNL’s PCS5 Software for the building structure and all process plant, equipment and building services.
- UKAEA / ITER Culham: Site Conduit Assembly Setting Jig and Fixture: Morson Projects are involved in the design and manufacture of a setting assembly jig for the production of conduit and tracking, which when installed in the torus vessel will carry all the necessary cables for additional diagnostic equipment to be installed in the vessel at a later date. Morson Projects responsibility was to design a fixture that recreates the all the necessary points that exist inside the torus vessel. All design work was via CATIA V5 working with the master models supplied by JET. The jig will be manufactured by Am Engineering. Morson Projects manufacturing partner, with whom we are liaising with regard to both the manufacture and the laser tracking of all the conduit pick-up points, which will be position to plus or minus 0.2mm. Morson Projects deliveries to JET were a solid model of the as build jig with a full set of 2D drawings.

The UK’s National Nuclear Laboratory offers an unrivalled breadth of technical products and services including nuclear waste management and decommissioning services and management technology.

Fuel Cycle Solutions
Products and services are focused on providing fundamental technical solutions to customers including fuel cycle performance and technology development, spent fuel disposition and plant integrity. Other services supported by an impressive range of facilities and links with international research organisations, academia and other national laboratories.

- NNL offers commercial technologies for customers and trusted technical advice to Government. Our highly skilled and experienced employees specialise in providing tailored waste management and decommissioning solutions incorporating world class innovation for successful project delivery. NNL’s ability to help build technical capacity for nuclear science and technology development both in the UK and internationally is based on our long-term operation of world-leading facilities and a wealth of technical experience, coupled with our significant network of global partnerships.

Main products/services or technologies
- Decommissioning
- Waste management
- Waste processing, conditioning & passivation
- Site restoration
- Environmental remediation & land restoration

- NNL provides technical support and services to customers in three key areas of the nuclear fuel cycle:
  - Waste Management and Decommissioning

Products and services are focused on supporting customers via the development and application of world-class technologies and techniques that assist with the ongoing and eventual decommissioning of nuclear facilities. These include environmental services, waste residue processing and waste management and decommissioning services.

Reactor Operations Support
- NNL provides key services to reactor operators. These include post irradiation examination and performance of fuel, components and other services. NNL is a world leader in the field of nuclear fuel cycle from fuel manufacture and power generation, through to reprocessing, waste management and decommissioning and including defence, new nuclear build and homeland security. NNL provides these services supported by an impressive range of facilities and links with international research organisations, academia and other national laboratories.

Experience/results, past clients
- NNL has experience of working successfully with a range of customers, both in the UK and internationally. In recent years, principal customers have included; Sellafield Ltd, US Department of Energy, IEA, BAE, Babcock, Westinghouse, UK Ministry of Defence, EDF Energy, UK Nuclear Decommissioning Authority, UK and International Governments and the European Union.

- As well as commercial work delivering the services outlined above, we also offer independent and authoritative advice to governments and nuclear regulators. We played an integral role in advising the UK government and nuclear regulator following the Great East Japan Earthquake and tsunami.
The National Physical Laboratory delivers social and economic impact through world-class measurement science, innovative applied research and knowledge services.

National Physical Laboratory

Brief Organisation profile
The National Physical Laboratory (NPL) is the UK’s National Measurement Institute, and is a world-leading centre of excellence in developing and applying the most accurate measurement standards, science and technology available. Formed in 1900 in south-west London, NPL now employs over 500 scientists. Its 36,000 square-metre purpose-built measurement building comprises 38 of the world’s most extensive and sophisticated measurement science laboratories.

NPL undertakes research and shares its expertise with government, business and society to help enhance economic performance and the quality of life. NPL’s measurements help to save lives, protect the environment, enable citizens to feel safe and secure, as well as supporting international trade. Support in areas such as the development of advanced medical treatments and environmental monitoring helps secure a better quality of life for all.

Main products/services or technologies
NPL has been involved in the radiometric science since 1912, when delivery was taken of the first British National Radium Standard from Marie Curie. Today, NPL is supporting clients in the nuclear industry to:
- Keep reactors safely in service by providing reference materials to demonstrate correct operation of monitoring programmes, measuring the performance of materials in service or ensuring the reliability of key data.
- Decommission sites and facilities through the accurate classification of waste to ensure the most appropriate and cost-effective disposal.
- Model and test new plant materials in harsh environments to aid design decisions and predict lifetime management.

NPL’s Radiocactivity team combines wide-ranging expertise with state-of-the-art equipment and laboratory facilities to support radioactivity measurements and provides:
- Reference materials for instrument calibration to support compliance with quality standards and in confidence in measurements.
- Specialist radiological services and facilities for the characterisation of samples.
- A comprehensive range of facilities for instrument development, validation and calibration.

Experience/results, past clients
As the UK’s National Metrology Institute (NMI), NPL is involved in many international networks and represents the UK internationally both at a technical level and at the highest level of metrology. NPL enjoys many interactions with the National Metrology Institute of Japan (NMI Japan):
- NPL engages in many international collaborative activities, including:
  - European Metrology Research Programme (EMRP)
  - CIPM Mutual Recognition Arrangement (CIPM MRA)
  - Versailles Project on Advanced Materials and Standards (VAMAS)
  - Other NMIs are encouraged in the nuclear field.
- NPL undertakes international work for organisations such as the IAEA and CBI TO.

Products and Services
- Decommissioning
  - Post-decommission clean-up (PDC)
  - Decontamination
  - Dismantling
  - Decommissioning & demolition
  - Waste management
  - Waste disposal (treatment/transportation)
  - Site restoration
- Complex materials
- Environmental monitoring
- Wastage and contamination

Company Information
Website address: www.npl.co.uk
Address: Hampton Road, Teddington, Middlesex, TW11 0LW
Phone: +44 20 8977 3222
Fax: +44 20 8614 0412
Email: www.npl.co.uk/contact-us or use contact person address (ray.chegwin@npl.co.uk)

Experience/results, next clients
The Skills Academy is working with Nuclear Decommissioning Authority (UK), JAEA, INPO (USA), IEN (FRANCE), UK Government, AREVA, EDF, WESTINGHOUSE, AMEC and more than 90 other nuclear companies.

It has developed a High Quality Training Provider Network which is tasked with delivering excellence in skills for nuclear to meet the quality required by the Nuclear Industry. A variety of courses are offered from undergraduate to postgraduate level at various Universities and Private Training Providers in the UK.

Main products/services or technologies
The Skills Academy can provide solutions and services in a variety of ways to enable high quality skills development. This includes but is not limited to:
1. Training and Skills development in all sub sectors of the industry including Decommissioning, Waste Management and Radiological Protection via our High Quality Training Provider Network in UK (Collaborators: UK Universities & private training providers).
2. Reduce costs of repeat training by providing consultancy on developing systems for recording and verification of training (Existing Client: World Institute of Nuclear Science and Technology (WIN)).

Nuclear Decommissioning
- Post-decommissioning clean-up (PDC)
- Decontamination
- Dismantling
- Decommissioning & demolition
- Waste management
- Waste disposal (treatment/transportation)
- Site restoration
- Complex materials
- Environmental monitoring
- Wastage and contamination

Company Information
Website address: www.nuclear.nsacademy.co.uk
Address: 9 Europe Way, Cockermouth, Cumbria CA13 0RJ, United Kingdom
Phone: +44 1900 898129
Fax: +44 1900 898129
Email: enquiries@nuclear.nsacademy.co.uk

Experience/results, next clients
The Skills Academy is working with Nuclear Decommissioning Authority (UK), JAEA, INPO (USA), IEN (FRANCE), UK Government, AREVA, EDF, WESTINGHOUSE, AMEC and more than 90 other nuclear companies.

It has developed a High Quality Training Provider Network in the UK which includes University of Central Lancashire, University of Birmingham, University of Liverpool, University of Manchester and more than 90 other universities and private institutions.

A comprehensive directory of UK nuclear training providers will be available from the Skills Academy in early 2013 and will detail training and Research & Development capabilities for each provider including Universities and private institutions.
NIS Limited

Brief Organisation profile
NIS are a specialist integrated engineering company established in 1983, providing bespoke design and manufacture of plant and equipment by transfer of technology across a broad and diverse range of markets. Our key objective is building on our 29 year history in provision of solutions to clients problems, using our experience and knowledge, while creating and maintaining world class performance. This is achieved by our continual pursuit of excellence. Our people, environment, communities and industries are central to our core values and at the heart of everything we do. It’s imperative to us that we deliver on our responsibilities. We do not just comply, we exceed, with nothing being more important to us than our safe, healthy workforce of around 200 people along with delighted customers and satisfied stakeholders.

Main products/services or technologies
NIS Ltd offers a full lifecycle engineering design service, from initial concept, optioneering and front end design, through to detail design, prototyping and manufacture implementation. Our highly skilled multi-disciplinary design teams have a wealth of experience, derived from many years delivering design solutions across a broad and diverse range of industries, including Nuclear, Automotive, Food, Aerospace and Security. Our conveniently located world class manufacturing facility is available to our clients, whether they are taking advantage of our complete ‘design for manufacture’ service or have chosen to engage us for ‘build to print’. A full product supply service is offered from manufacture to assembly, test, installation and commissioning. The design and manufacture of bespoke equipment, or prototypes, is one of our key strengths, but we recognise that this is often the first step on a journey towards mass production or further development work. NIS work with various technologies including:
- Mechanical handling
- Robotics
- Welding technologies
- Control systems
- HVAC technologies

Experience/results, past clients
NIS clients are internationally recognised market leaders. Within our industrial sector we work with renowned organisations such as BAE Systems, L3 Communications, Mitsubishi (Lucite) and Nipon Sheet Glass (NSG) Pilkington. Within the nuclear sector our primary clients are the UK Nuclear Decommissioning Authority (NDA) Estate e.g. Sellafield and the Ministry of Defence (MOD) e.g. Atomic Weapons Establishment (AW). Our contracts within these organisations are either direct or on behalf of international delivery providers such as AMEC, Babcock, Jacobs and Doosan Power Systems.

Nprojx Ltd

Brief Organisation profile
New start-up business established in 2011 comprises of highly experienced self motivated staff and UK recognised expert associates. This business offers cost effective solutions with a focus on technical excellence through experience with bespoke client support service. We supply first class specialists with a wealth of experience, knowledge and a reputation for problem solving. Capital bond to be arranged by negotiation.

Main products/services or technologies
Our range of services includes: Environmental monitoring and assessment solutions for drain, bore holes, core sample voids, ducting and in plant pipework. GIS and GPS supported reporting. Calibrated instrumentation with a good track record of recent project success and innovation. This UK unique system is capable of monitoring bespoke environments (including underground) from 100mm dia. to 600mm dia. at 150m in length. The systems has video capture, distance measurement and gamma spectroscopy. We have designed several systems to monitor low and high activity gamma environments (gross cpm, net peak cpm and disre rate) Decommissioning Site Restoration Advice Decommissioning Strategy & Operations Decommissioning Concept Schemes
**Nuclear Decommissioning Services Ltd (NDSL)**

NDSL provides a trusted, cost-effective and professional decommissioning service on nuclear sites in the UK and Europe.

**Nuclear Engineering Services Limited (NES)**

NES specialise in design, manufacture, assembly, test, commissioning and installation of bespoke solutions for nuclear decommissioning, new build and defence markets.

---

**Products and Services**

- Decommissioning
- Decontamination
- Waste management
- Waste storage & transportation
- Site restoration

**Company Information**

- **Website address**: www.nes-limited.com
- **Address**: NES House, Spring Road, Etttingshall, Wolverhampton, West Midlands, WV4 6XJ, England
- **Phone**: +44 1902 483 210
- **Fax**: +44 1902 483 210
- **Email**: sales@nes-limited.com

---

**Products and Services**

- Decommissioning
- Decontamination
- Waste management
- Waste storage & transportation

**Company Information**

- **Website address**: www.nes-limited.com
- **Address**: NES House, Spring Road, Etttingshall, Wolverhampton, West Midlands, WV4 6XJ, England
- **Phone**: +44 1902 353 353
- **Fax**: +44 1902 483 210
- **Email**: sales@nes-limited.com

---

**Products and Services**

- Decommissioning
- Decontamination
- Waste management
- Waste storage & transportation

**Company Information**

- **Website address**: www.nes-limited.com
- **Address**: NES House, Spring Road, Etttingshall, Wolverhampton, West Midlands, WV4 6XJ, England
- **Phone**: +44 1902 353 353
- **Fax**: +44 1902 483 210
- **Email**: sales@nes-limited.com

---

**Products and Services**

- Decommissioning
- Decontamination
- Waste management
- Waste storage & transportation

**Company Information**

- **Website address**: www.nes-limited.com
- **Address**: NES House, Spring Road, Etttingshall, Wolverhampton, West Midlands, WV4 6XJ, England
- **Phone**: +44 1902 353 353
- **Fax**: +44 1902 483 210
- **Email**: sales@nes-limited.com

---

**Brief Organisation profile**

NDSL was established in 2001 to provide consulting to the nuclear industry with an emphasis on decommissioning. The Company started to undertake implementation work in 2006 and now has around 75 manual workers including decommissioning operatives, fitters, electricians, alkali metal workers, asbestos removal workers and health physics surveyors. The Company has its Head Office close to the Dounreay nuclear site in Scotland and currently 70% of the Company’s work is for that site with 65 manual workers and 9 project engineers and managers working full time on that site. In addition the Company is currently providing a waste packing team to the Winfrith site, is repackaging sodium metal in Italy and has a full time engineer based at the EU Commission site at Ispra in Italy. Turnover in 2011/12 was £5.5M.

**Main products/services or technologies**

- Nuclear Decommissioning Planning, Design and Implementation. This includes the preparation of Plant Decommissioning Programmes which show how a plant is to be decommissioned, the detailed design for various aspects of the work including how much waste of each category will be produced and how it will be packaged for disposal.
- Nuclear Ventilation System Design, Installation and Commissioning. This includes concept, scheme and detail design, design justification and substantiation.
- High Mol Metal Repacking and Disposal. This includes the assessment as to how the material should be extracted from its current position, how it may be best packaged and how it should be destroyed given that alkali metal should not be stored due to its chemical reactivity.
- Asbestos Survey and Removal. The Company has a Health & Safety Executive licence for the removal and disposal of asbestos from both radiological and domestic/commercial buildings.
- Provision of Seconded Manpower. NDSL provides personnel to work as part of integrated teams at nuclear sites. These personnel can range from project managers to decommissioning operatives.

**Experience/results, past clients**

- NDSL holds a number of current Framework Agreements:
  - Provision of Professional Services to Dounreay Site Restoration Ltd (DSRL) (ex UKAEA)
  - Provision of Decommissioning Operators to Dounreay (DSRL)
  - Provision of Decommissioning Services to Winfrith Research Sites Restoration Ltd (ex UKAEA)
  - Provision of Project Management Assistance to EU Commission Joint Research Centre at Ispra (Italia) (Amec/EU Commission)
  - Provision of Asbestos Removal to Highland Council

- **Clients include**: UKAEA (now DSRL and RSRL) / Magnox EU Commission / Weiheraufarbeitungsanlage Karlsruhe Buckau and Entsorgungs GmbH (German company managing decommissioning of Kernkraftwerk Riedel) / Orim S.p.A (Italian waste company) / Amec / James Fisher Nuclear Ltd / Highland Council

---

**Brief Organisation profile**

NES has over 50 years’ nuclear experience, with origins dating back to John Thompson and the supply of the first UK nuclear reactor housing to Dounreay. The UK across three locations, Wolverhampton – Head Office, Risley – Centre of Engineering Excellence and Beckerton – North West Division, NES’ unique capabilities, facilities and experience ideally position us to take on a variety of projects on a national and international basis.

**Main products/services or technologies**

- Decommissioning
- Decontamination
- Waste management
- Waste storage & transportation
- Site restoration

**Experience/results, past clients**

- NES has supplied equipment to all three Silo Emptying Plant (SEP) Mobile Caves. Each machine weighs approximately 450 tonnes and will extract ILW from 22 vertical silos. NES has also supplied equipment for Ignalina Nuclear Power Plant, Lithuania.

**Products and Services**

- Decommissioning
- Decontamination
- Waste management
- Waste storage & transportation

**Company Information**

- **Website address**: www.nes-limited.com
- **Address**: NES House, Spring Road, Etttingshall, Wolverhampton, West Midlands, WV4 6XJ, England
- **Phone**: +44 1902 353 353
- **Fax**: +44 1902 483 210
- **Email**: sales@nes-limited.com

---

**Brief Organisation profile**

NES is over 50 years’ nuclear experience, with origins dating back to John Thompson and the supply of the first UK nuclear reactor housing to Dounreay. The UK across three locations, Wolverhampton – Head Office, Risley – Centre of Engineering Excellence and Beckerton – North West Division, NES’ unique capabilities, facilities and experience ideally position us to take on a variety of projects on a national and international basis.

**Main products/services or technologies**

- Decommissioning
- Decontamination
- Waste management
- Waste storage & transportation
- Site restoration

**Experience/results, past clients**

- NES has supplied equipment to all three Silo Emptying Plant (SEP) Mobile Caves. Each machine weighs approximately 450 tonnes and will extract ILW from 22 vertical silos. NES has also supplied equipment for Ignalina Nuclear Power Plant, Lithuania.

**Products and Services**

- Decommissioning
- Decontamination
- Waste management
- Waste storage & transportation

**Company Information**

- **Website address**: www.nes-limited.com
- **Address**: NES House, Spring Road, Etttingshall, Wolverhampton, West Midlands, WV4 6XJ, England
- **Phone**: +44 1902 353 353
- **Fax**: +44 1902 483 210
- **Email**: sales@nes-limited.com
A Centre Of Excellence In The Delivery Of Nuclear Consultancy And Support Services

Nuclear Technologies (A Division of TUV SUD (UK) Limited)

Brief Organisation profile
The company was founded in 1994 and had an annual turnover of £7m in 2011. We currently employ 100 Consultants based in our offices throughout the UK and seconded into client sites.

Nuclear Technologies plc was acquired by TÜV SÜD (UK) Ltd on 31st August 2006, thus providing us with access to international expertise from this major German organisation. TUV SÜD Industry Services division supplies engineering, testing and inspection services for manufacturers and operators of process-engineering plants, buildings and infrastructural facilities as well as authorities and communities. Since then TUV SÜD has acquired a number of additional companies in the UK. As such the TÜV SÜD (UK) Group of companies have now been brought together to consolidate and improve services such as Finance, IT, HR, Security etc, thus enhancing the day to day operations of each individual company. Consequently Nuclear Technologies now operate as a division of TUV SÜD (UK) Ltd although we still operate as an independent business unit.

Many of our Consultants are internationally recognised experts with an outstanding record of achievement in the nuclear industry.

Main products/services or technologies
Nuclear Technologies is a leading supplier of professional scientific and engineering consultancy services to the Nuclear Industry, specialising in:

• Criticality & Shielding Assessment
• Radioactive Waste Management
• Environmental Management and Analysis
• Decommissioning Management
• Decontamination
• Safety Assessment, Safety Case Production and Peer Review
• Engineering
• Design Validation
• Radioactive Material Transport, Packaging and Storage Studies

Experience/results, past clients
Nuclear Technologies operate mainly in the UK but are also currently involved in the ITER project in Spain and on the new geological disposal facility for Andra in France.

We have also supported our parent company, TUV SUD, internationally on a number of nuclear projects for Russia, Germany, Korea and Japan. Specifically for Japan this included providing support to decommissioning planning at Tsuruga NPP, decommissioning estimating and we hosted a Japanese delegation on decommissioning in the UK.

Nuclear Technology Education Consortium

Nuclear Technology Education Consortium Master of Science, Postgraduate Certificate, Diploma and Courses for Industry

Brief Organisation profile
Established 2005
The Consortium comprises the Universities of Birmingham, Central Lancashire, Lancaster, Leeds, Liverpool, Manchester and Sheffield, City University, London, Defence Academy - College of Management and Technology, Imperial College London and UHI Millennium Institute

The structure and content of the programme, which leads to qualifications up to Master’s level in Nuclear Science & Technology, was established following extensive consultations with the nuclear industry, regulators and Government Departments.

All the modules are delivered by direct teaching but the following have been converted into a distance learning format as an alternative method of delivery to provide greater choice for students:

• N01 Reactor Physics, Criticality & Design
• N02 Nuclear Fuel Cycle
• N03 Radiation & Radiological Protection
• N04 Decommissioning / Waste / Environmental Management
• N05 Nuclear Safety Case Development
• N06 Processing, Storage and Disposal of Nuclear Wastes
• N12 Reactor Thermal Hydraulics
• N13 Criticality Safety Management
• N26 Decommissioning Technology & Robotics
• N31 Management of the Decommissioning Process

Main products/services or technologies
The programme has been designed specifically for the needs of the nuclear industry. It offers an extremely broad portfolio of subjects, including decommissioning to waste disposal & storage.

It is ideal for employee development with each module may be taken as a standalone short course for Continuing Professional Development purposes. Great flexibility: the modular format allows students to undertake an MSc. on a part-time basis over a period of 3 years as well as full-time in 1 year.

Students may also undertake a Postgraduate Diploma or Postgraduate Certificate within the framework of the programme.

Each of the modules contains the same syllabus as its counterpart and had an annual turnover of £7m in 2011.

Great flexibility: the modular format allows students to undertake an MSc. on a part-time basis over a period of 3 years as well as full-time in 1 year.

They are available once a year at a fixed time in order to facilitate the concept of a virtual classroom. A web-based Virtual Learning Environment provides access from anywhere in the World. It includes course handbooks, course content, timetables, discussion groups, video clips and email.

Experience/results, past clients
Previous students have been from Canada, Sweden, France, South Africa, Finland, Ireland, Netherlands, Lebanon, China, Malaysia, Austria, Nigeria, United Arab Emirates and Kazakhstan.
Snake-arm robots – robots for confined and hazardous spaces

**OC Robotics**

**Brief Organisation profile**
OC Robotics (established 1997, 15 employees) has world leading robot technology. The company is focused on providing automation for high value confined spaces including nuclear aerospace and industrial machines.

**Main products/services or technologies**

**SNAKE-ARM** We have developed a new type of remote handling manipulator called a snake-arm robot. These are multi-jointed, wire rope drive robots that can nose-follow into confined spaces. The design is particularly relevant to high radiation areas as drive motors and electronics can be located ‘outside’ in a man-accessible area. These robots have particular relevance for inspection and conducting work within the Tonus Room, PCV and RPV. The robots have been used for many remote handling tasks including, inspection, gripping and handling, water-jetting, cutting with lasers, NDE and process applications.

**MOBILE VEHICLE PLUS SNAKE-ARM** A vehicle plus snake-arm has applications in all areas of the Fukushima plant.

**REMOTE CONTROL SYSTEM** In the course of developing snake-arm robots, OC Robotics has also developed software and electronics architectures for long distance remote control of hardware over fibre LAN, advanced graphical user interfaces, and data management software. OC Robotics also offer remote handling consultancy services.

**Experience/results, past clients**
OC Robotics has developed and delivered equipment to Ringhals (Sweden) and Pickering (Canada) Nuclear Power Plants. Trials have been conducted with Areva, Sellafield and EDF. Further details including case studies and videos are available at www.ocrobotics.com.

**Products and Services**

- Decommissioning
- Decontamination
- De-energising & demolition
- Waste management
- Site restoration
- Environmental remediation
- Waste disposal
- Waste processing
- Site restoration
- Operational clean-out (POCO)

**Company Information**

Website address: www.ocrobotics.com

Address: Unit 4, Abbey Wood Business Park, Filton, Bristol, BS34 7J0, UK

Phone: +44 117 3114700

Email: rob@ocrobotics.com (Rob Buckingham)

Name of Distributor/Agent in Japan:

- eEnergy Corporation

Address: 7-19, Akaiake 1-chome, Minato-ku, Tokyo 1078052, Japan

Email: sawamoto@e-energy.co.jp (Masahiro Sawamoto)

- Energy Corporation

Address: 3F Tobu Fuj Bldg, 24-4 Sakurajapoka-chi, Shibuya-ku Tokyo, 150-0031

Phone: +81 70 6997 2875

Fax: +81 3 3476 1377

Email: Arata.Oguri@arup.com

- Arup & Partners Japan Ltd

Address: Level 5, Festival Walk, 80 Tat Chee Avenue, Kowloon Tong, Hong Kong

Phone: (852) 2268 3457

Fax: (852) 2268 3970

Email: peter-a.thompson@arup.com

Name of Distributor/Agent in Japan:

- Ove Arup & Partners Japan Ltd

Address: 3F Tobu Fuj Bldg, 24-4 Sakurajapoka-chi, Shibuya-ku Tokyo, 150-0031

Phone: +81 70 6997 2875

Fax: +81 3 3476 1377

Email: Arata.Oguri@arup.com

**We shape a better world**

**Ove Arup & Partners Hong Kong Ltd**

**Brief Organisation profile**

Arup is the creative force at the heart of many of the world’s most prominent projects in the built environment and across industry. We offer a broad range of professional services that combine to make a real difference to our clients and the communities in which we work.

We are truly global. From 90 offices in 35 countries our 10,000 planners, designers, engineers and consultants offer a broad range of professional services that combine to make a real difference to our clients and the communities in which we work. We are truly global. From 90 offices in 35 countries our 10,000 planners, designers, engineers and consultants offer a broad range of professional services that combine to make a real difference to our clients and the communities in which we work.

**Main products/services or technologies**


- Industrial Engineering, Project Management, Venue Consultancy, Drainage and Sewerage, Infrastructure, Railways, Water Engineering.

**Experience/results, past clients**

Provelio Nuclear Limited

Real Estate and Management Services to the Nuclear Industry

Brief Organisation profile
Provelio Nuclear Ltd view land, property, plant, people and time as finite and valuable resources and aim to derive as much value as possible from these. Working alongside our clients we aim to challenge conventional thinking, drawing on experiences gained both inside and outside of the nuclear industry. Provelio Nuclear is a sister company of Provelio Ltd, a consultancy company specializing in the provision of management advice to the estates and construction industries.

Main products/services or technologies
• Real Estate
  - Strategy Advice and Planning
  - Business Change Management and Benefits Realisation
  - Investment Appraisal and Business Case Development
  - Procurement and Framework Advice
  - Risk Management
  - Business Rate Management
  - Acquisition and Disposal of Properties and Land
  - Landlord and Tenant Services
  - Service Charge Administration

Programme and Project Management
• Strategy, Controlled Delivery
• Procurement and Contract Advice
• Value and Risk Management
• Infrastructure, Engineering and Specialist Equipment Management
• Intervention, Recovery, Project Assurance and Audit Services
• CDM-C Consultancy Services

Development Management
• Development Appraisal
• Town and Country Planning Management
• Commercial Structures
• Fund Monitoring

Experience/results, past clients
Provelio Nuclear acts for Magnox Limited providing real estate management services across the UK. This includes one operational nuclear power station, nine stations in various stages of decommissioning, one hydroelectric station and various conventional facilities. One of the founders of Provelio Nuclear has worked closely with the Japanese Waste Industry via close association with Panasonic and their world leading recycling facility, METEC. This association was in his capacity as director of a previous company. Close links still remain both within Japan and large parts of Europe.

Pursuit Dynamics PLC (PDX)

Expert for mobile decommissioning

Brief Organisation profile
Pursuit Dynamics PLC (PDX) is a UK based intellectual property and technology company that is actively commercializing its Vapour Jet Technology based products within multiple market sectors. PDX decommissioning products support emergency responders across the globe, providing rapid and effective full spectrum nuclear and radiological decontamination with minimal liquid use. Broad chemical capability, coupled with super-fine droplet generation and complete non-line of sight coverage, affords complete threat mitigation within a single PDX system. We provide portable and mobile decontamination solutions both being equipped with our patented Vapour Jet technology that generates micro droplets to ensure even and consistent coverage. Covering the entire nuclear threat spectrum PDX Vapour Jet Technology is compatible with diverse range of decontaminants including.

Main products/services or technologies
• First Response System (FRS)
  - Offering lightweight and cost effective decommissioning the FRS is a highly mobile and robust back pack designed for maximum operational flexibility. The perfect nuclear decommissioning solution in localized environments, for light vehicles and for personnel providing pressurized air, chemical agent and discharge module all in one unit.

N 800 Area and room decommissioning
Our larger integrated wide-area (~2000m²) solution combines our technology with true operational level decommissioning capability and excellent rapid room filling capacity. Suitable for large scale infrastructure and heavier items of military equipment the mobile stand-alone system compliments the FRS in providing the end user with a complete CBRN capability.

PDX continues to contribute to important advances in aerosol delivery and decontamination technology.

Directory of UK Decommissioning Technologies and Capabilities – Proven in the UK and overseas
Raddec (Radiochemical & Decommissioning Solutions) supplies innovative extraction instruments to support nuclear waste characterization (for extracting $^{14}\text{C}$, $^{36}\text{Cl}$, $^{129}\text{I}$ & tritium)

**Raddec International Ltd**

**Brief Organisation profile**
Raddec Limited, established in 2003, is a small specialized producer of innovative instruments for extracting volatile radionuclides from decommissioning and environmental materials.

Raddec instruments are used in nuclear, research, defence and commercial laboratories worldwide. The systems have been developed following rigorous testing to ensure rapid extraction of tritium, C-14 and halogens from diverse materials including decommissioning waste, concrete, graphite, metal, insulation, etc. and environmental materials (soils, biota).

The Pyrolyser multi-tube extraction systems are fully integrated, space-efficient instruments that incorporate controllable heating, metered air and oxygen flows, catalytic oxidation and an extraction chain to quantitatively trap fully-oxidised sample decomposition products. Up to 6 samples can be extracted at one time over a period as short as 2 hours.

Raddec has expanded its instrument range to include a Hyperbaric Oxidiser to facilitate rapid decomposition of organic matrices.

**Main products/services or technologies**
- Pyrolyser-2, Pyrolyser-4 and Pyrolyser-6 extraction systems
- HBO Hyperbaric Oxygen Decomposition System

**Experience/results, past clients**
Raddec instruments are used in leading nuclear, research, defence and commercial laboratories worldwide. The systems have been developed following extensive testing in a university research environment. Their effectiveness is underpinned by publications in the international scientific literature.

Over 50 systems are installed worldwide (USA, UK, S. Korea, China, Sweden, France, Switzerland). Several clients operate up to 5 systems in a single laboratory.

**Products and Services**
- **Decommissioning**
  - Post-Operational Clean-out (POCO)
  - Decontamination
  - Dismantling
- **Waste management**
  - Waste processing, conditioning & passivation
  - Waste disposal
- **Site restoration**
  - Site remediation and decontamination
  - Site decontamination and remediation
- **Waste disposal (licensing / repository)**
  - Waste storage & transport
- **Post clean-up release surveys**

**Company Information**
- **Website address:** www.raddec-int.com
- **Address:** Suite 63, 151 High Street, Southampton, SO14 2BT, UK
- **Phone:** +44 (0)7739 898344
- **Fax:** +44 (0)23 80231667
- **Email:** sales@raddec-int.com

A dynamic and flexible solution to radiological safety

**Radwise Limited**

**Brief Organisation profile**
Radwise were formed in 2000 to provide radiological protection support services to the nuclear industry. With currently over 250 personnel working across 14 locations in the United Kingdom, we are a Tier 2 supplier to the NDA Supply Chain. Anticipated turnover for year ending January 2013 is approx. £19.5M, January 2014 is approx. £19M.

**Main products/services or technologies**
- Reactor Outage - Reactor Vessel Entry Support
- Reactor Outage - Fuel Route Support
- Nuclear Facilities Decommissioning
- Land Remediation
- Borehole Surveys
- Nuclear Submarine Re-fuelling
- Nuclear Submarine Refurbishment

**Experience/results, past clients**
- We have held a Framework Agreement with Magnox since 2003 (successfully retendered in 2007) to provide services across the majority of their sites.
- This Framework Agreement with EDF Energy since 2010 to provide services to the majority of their sites. Support provided to EDF at present is mainly ‘Balance of Plant’ during statutory outage programmes; there are a few EDF sites (Dungeness, Hinkley & Sizewell) where we provide all year round support.

**Products and Services**
- **Decommissioning**
  - Post-Operational Clean-out (POCO)
- **Decontamination**
- **Dismantling**
- **Waste management**
  - Waste processing, conditioning & passivation
  - Waste disposal
- **Site restoration**
  - Site remediation and decontamination
  - Site decontamination and remediation
  - Site remediation and clean-up

**Company Information**
- **Website address:** www.radwiselimited.co.uk
- **Address:** 36 Ballot Road, Irvine, North Ayrshire, Scotland, United Kingdom
- **Phone:** +44 (0) 1294 318375
- **Fax:** +44 (0) 1294 318373
- **Email:** davidmcbride@radwiselimited.co.uk

**Our Services**
- With a highly competent and motivated workforce delivering a high level of customer satisfaction, Radwise can provide the services of:
  - Health Physicists
  - Health Physics Support Managers
  - Health Physics Supervisors
  - Health Physics Decommissioning Operatives
  - Health Physics Technicians
  - Health Physics Support Technicians
  - Health Physics Trainers

**Our Capabilities**
Radwise have gained extensive experience in the field of radiological protection services over the years by focusing on working together with our clients to ensure the best service is provided. Radwise can provide radiological protection personnel with considerable experience in areas such as:
- Reactor Operational Support
- Reactor Projects Support
- Reactor Outage - Balance of Plant Support
Nuclear decommissioning consultancy services, from strategic level to project implementation, including the unique and world-beating N-Visage™ radiometric modelling technique

REACT Engineering Ltd

Brief Organisation profile
REACT is a leader in developing innovative and robust engineering and management solutions to address the nuclear decommissioning, waste management and asset care challenges faced by the UK nuclear industry. The company was established in 1994 "to make nuclear clean-up happen through provision of creative engineering solutions and independent challenge". Based near Sellafield, the UK’s largest nuclear facility, REACT now employs around thirty engineers and has also generated several sister companies, each developing pioneering technologies. N-Visage™ is one such technology, which is undergoing constant development. REACT has built up an exemplary reputation and wide customer base within the UK. It will continue to apply its world class decommissioning knowledge and experience, through independence and innovation, to the greatest challenges in the nuclear sector.

Main products/services or technologies
N-Visage™ is a patented modelling technique that predicts the location and size of radiation source terms within a 3D model of a facility. The model can be manipulated, through the shielding or reduction/removal of sources, and revised dose maps produced. The technique allows projects to understand complex dose environments and to identify remediation strategies underpinned by accurate dose estimates. The technique has proven itself to be a high value, often ‘game changing’, service that is delivered within REACT’s established core of nuclear consultancy expertise.

Experience/results, past clients
One of the N-Visage™ projects already completed.

• Decommissioning plans for a non-man access area in an operational plant assumed that remote operations were necessary, with high costs and durations.

• The N-Visage™ Gamma Imager was deployed remotely into the area. Gamma images, dose rates and isotopic information were recorded.

• Analysis of the information proved that with an appropriate clean out of vessels in the area, targeting certain isotopes, manually supported semi-remote decommissioning would be possible.

• This knowledge removed uncertainty and risk in the clean out and decommissioning plans, potentially saving tens of millions of pounds.

The leading manufacturer of chemical, particulate and respiratory protective solutions

Respirex International Limited

Brief Organisation profile
Respirex are a world leading supplier of personal protective solutions, specialising in the design and manufacture of high-performance chemical, particulate and respiratory protective clothing. Founded in 1957, Respirex started the manufacturer of chemical protective clothing in 1978 for the petrochemical industry and established our UKAS accredited testing laboratory in 1994.

Since moving to our current Redhill factory in 1997 the company has grown steadily and opened a new automated boot factory in Reigate in 2010. The company now employs 100 full time staff and has a turnover of £8.5 million.

Main products/services or technologies
Our product range encompasses gas tight suits, chemical splash suits and CBIN equipment for fire and emergency services teams and emergency responders; air-fed chemically protective suits and chemical workwear for the petrochemical and pharmaceutical industries and particulate suits and hoods for nuclear and pharmaceutical industries. Our state of the art automated footwear factory produces a range of protective boots and overboots providing protection from hazardous chemicals and high voltages, along with specialist food industry boots and general safety boots.

We are unique in offering a complete service that includes standard or tailored equipment solutions combined with univalued training, aftersales and support.

Experience/results, past clients
Nuclear power generation, decommissioning and fuel manufacturing clients for our particulate garments include: Sellafield (UK), Magnox Limited electricity generation (UK), Springfields Ltd (Weakishouse) (UK), LLW Repository (UK) and Savannah River (USA).

We supply gas tight suits to fire and emergency teams around the world, including the London Fire Brigade (UK), Ministry of Defence (UK), N.S.W Fire brigade (Australia), Fire and Rescue Department of Malaysia (Malaysia). Clients for our chemical protective suits and workwear include Exxon, BP, Shell, Total, Permex and PDVSA.

Directory of UK Decommissioning Technologies and Capabilities – Proven in the UK and overseas
Well established, independent, specialist safety and risk management consulting and training company. Clients - major hazard industries, commercial, public sector

**Risktec Solutions Limited**

**Brief Organisation profile**

**Established 2001. 13 Offices World Wide (Middle East and North America).**

200 Employees, plus Associates through our Agency Division ASTEC.

**Annual Turnover £25M.** We assist clients in major hazard industries and commercial and public sectors to manage health, safety, security, environmental and business risk.

Risktec has its principal office in Warrington in the UK, centre of UK Nuclear Engineering. Risktec is owned by its employees, hence promoting stability and involvement.

Risktec ranked 3rd fastest-growing private company in the UK, 80th in the Sunday Times International Track 100 of British firms with the fastest-growing overseas sales.

We are privileged to have worked with many of the world’s best companies as clients in the civil nuclear market.

**Main products/services or technologies**

- Training and education in Safety and Risk Assessment (including formal post graduate qualifications)
- Safety Case Production and Management (Decommissioning and Operations)
- Hazard Identification
- Consequence and Frequency Assessment
- Fire & Explosion Assessment
- Physical Effects Modelling
- Human Factors in Design & Operations
- Deterministic Assessment
- Fault Tree and Event Tree Analysis
- Probabilistic Safety Assessment
- Safety Integrity Level Assessment
- Health, Safety and Environmental Management Systems
- Risk Reduction & ALARP
- Justification
- Substantiation Reports
- Accident & Investigation Analysis
- Production / review works test documents and operator procedures
- Emergency Response Planning
- Competency Management, Culture & Behaviour
- Periodic Safety Review
- INS/IAA Peer Review
- Independent Nuclear Assessment
- Independent Technical Assessment
- Licensing Support
- Project Management

Experience/results, past clients

Risktec/John Moores University M.Sc. Bespoke training & education programme to Federal Authority for Nuclear Regulation (UAE nuclear regulating body). The training/education programme is part of the Federal Authority for Nuclear Regulatory (FANR) organisational capacity building activities and has led to post graduate qualifications (PgCert, PgDip, MSc) for FANR personnel.


**Mataco is a cloud-based solution which offers standards compliant business continuity plan management, exercising and review**

**Brief Organisation profile**

Mataco was established in 1986 and now employs 41 people and has a turnover of £3.5M per annum.

We have a team of over 40 highly trained and experienced professionals providing both development and consulting services.

We have long established relationships with our clients and pride ourselves on the quality of our work and our commitment to understanding and meeting our clients’ requirements.

Savant Limited is accredited to ISO22301 and the BCI’s GPGs.

We have provided life critical software development and support services to a range of customers for over 25 years.

We have over 25 years of experience in providing support for business critical systems. We work in partnership with our clients to understand their requirements and deliver quality solutions.

**Experience/results, past clients**

Other Mataco customers include:

- Sellafield Limited
- PRC for Music
- Kent County Council
- Higher Education Funding Council for Wales
- General Pharmaceutical Council

Other clients include:

- British Medical Journal
- National Health Service Blood and Transplant
- Northern Ireland Blood Transfusion Service

**Company Information**

Website address:

www.risktec.co.uk

Address:

Wilderspool Park, Greenall’s Avenue, Warrington, WA4 6HL, UK

Phone:

+44 2 959 61200

Fax:

+44 925 611232

Email:

enquiries@risktec.co.uk

**Products and Services**

- Decommissioning
- De-energising & demolition
- Waste management
- Waste storage & transport
- Site restoration
- Tank decontamination & tank cleaning
- Environmental contamination soil remediation
- Environmental sampling

**Company Information**

Website address:

www.mataco.co.uk

Address:

Dalton Hall Business Centre, Dalton Lane, Burton-on- Kendal, Cumbria, LA8 1BL

Phone:

+44 1 524 784 400

Fax:

+44 1 870 460 1023

Email:

mataco@savant.co.uk

**Products and Services**

- Decommissioning
- Dismantling
- Decontamination
- Waste management
- Waste disposal (transposition and stockpiling)
- Waste storage & transport
- Site restoration
- Post clean-up release surveys

**Other**

- Waste & Facilities Management

**Main products/services or technologies**

Sellafield Limited is one of a range of clients we are helping to continue to serve its customers when hit by interruptions like snow, flood and flu. We do this with business continuity software and consultancy. Our Mataco product is web based and offers standards compliant business continuity plan management, exercising and review. With its mobile access, Mataco ensures you can get at your plans and documents whenever you need them.

Many organisations use Mataco to store all the core data relating to their business in a single secure online database, that enables dependencies between the data to be easily identified and reported on. Mataco enables templates to be set up in one place to reuse in many Plans and Reports, which ensures consistency and significantly speeds up the process.

Mataco supports the full BCP process as defined in BS25999, ISO22301 and the BCI’s GPGs, including plan generation, review, audit and exercising.

**Experience/results, past clients**

Other Mataco customers include:

- Sellafield Limited
- PRC for Music
- Kent County Council
- Higher Education Funding Council for Wales
- General Pharmaceutical Council

Other clients include:

- British Medical Journal
- National Health Service Blood and Transplant
- Northern Ireland Blood Transfusion Service
Giving robots fully-human hands so they can operate dexterously on behalf of humans

Shadow Robot Company Ltd

Brief Organisation profile
Shadow was founded in 1997 by a group of independent robotics researchers. It now has 22 staff primarily in London, and provides robotics research and consultancy as well as manufacturing robotic hands and other components for researchers all over the world. The company is almost entirely employee-owned.

Main products/services or technologies
Shadow’s key technology is the Dexterous Hand, the most advanced human-like robotic hand available. This can be used on a wide range of robotic systems, to give them dexterous manipulation capabilities comparable to a human, allowing replacement of the human in difficult, dirty or dangerous tasks. It can be controlled directly from a remote glove (see image) or from software systems. Shadow also actively works with partner organisations to explore applications for robotic manipulation and develop new technologies in that area.

Experience/results, past clients
Shadow’s research systems are currently in use at NAIST and at Akita University in Japan. Please contact our distribution partner for references.

Sound Mathematics Ltd

Brief Organisation profile
Sound Mathematics Ltd was founded in 2009 by Professor Larissa Fradkin. It inherited from the Waves and Research Group based at London South Bank University that Professor Fradkin ran from 1993 to 2009. It is a micro-company usually employing – apart from Professor Fradkin – one more senior research scientist. Being an R&D company South Mathematics just uses a working capital of about £30,000.

Main products/services or technologies
Joint development of novel software solutions for ultrasonic NDT

Experience/results, past clients
Sound Mathematics Ltd was founded in 2009 by Professor Larissa Fradkin. It inherited from the Waves and Research Group based at London South Bank University that Professor Fradkin ran from 1993 to 2009. The company’s main clients are British Energy – now EDF and CEA, France. British Energy is using the company’s subroutines for assessing chances of detecting a large back-wall crack using ultrasonic NDT. Collaboration with CEA is on-going, with the company contributing subroutines to CIVA, a well-known software package for simulating NDT&E. The company also collaborates with Doosan Power Systems, developing novel semi-

Semi-analytical modelling of ultrasonic inspection, including advanced mixed image/signal processing codes for defect characterisation

Sound Mathematics Ltd
Structure Vision Ltd provides the world’s first Nuclear Decommissioning software - NuPlant™ - for simulation and optimization of decommissioning liabilities and costs

Structure Vision Ltd

Brief Organisation profile
Structure Vision Ltd was established in 2003 as a spin-out from the University of Leeds, Institute of Particle Science and Engineering. Our first software product – DigiPac™ – was formed from years of research into the characteristics of powders and particles. Early research and development was supported by, among others, BNFL, British Nuclear Group and the Nuclear Installations Inspectorate. This then lead to the development of NuPlant™, specifically designed to address the needs of the Nuclear Decommissioning community.

Structure Vision Ltd is privately owned. The Chairman of the board is Neville Chambertin CBE, previously CEO of BNFL and Chairman of Unenco. Other Directors include Dr Peter Watson OBE, previously CEO of AEA Technology and Professor Richard Williams OBE, joint founder of the company and Pro-Vice Chancellor at the University of Birmingham.

Main products/services or technologies
We provide software licenses and services based around our two main product lines. NuPlant™ provides a new approach to decommissioning a nuclear facility. It is specifically designed to address the needs of decommissioning contractors, site operators, reactor vendors and utilities in planning, optimizing and estimating the costs of decommissioning complete facilities. NuPlant™ is based around a powerful 3D virtual reality model of the nuclear plant. It can be used to determine optimal cutting, dismantling and packing schemes for active nuclear wastes, and perform dose uptake analysis for radioactive sources.

DigiPac™ is our original product which can be used to model the structure and determine the properties of various particulate systems. Its unique feature is the ability to accurately model particles of arbitrary shape and size, from nanoparticles to large objects. It has particular applications in the chemicals industry for catalyst pellet analysis, pharmaceutical powders and fast moving consumer goods.

We can also provide scanning of powder and particle samples to a resolution of 20 nanometres. Movies of our products in action are available at www.youtube.com/user/StructureVision Ltd.

Experience/results, past clients
We have a number of existing customers for both our services and software. These include the following for NuPlant™:
- Sellafield Ltd
- National Nuclear Laboratories
- National Institute of Physics and Nuclear Engineering, Romania
- SGCM, Italy
- Energy Solutions
- Niva Ltd
- Low Level Waste Repositoy Ltd
- NuPlant™ has been used to model the decommissioning of facilities ranging from small laboratories, waste silos, to entire PWR reactors for these customers. It is also applicable to new build facilities to accurately predict, plan and cost the future decommissioning.

Our DigiPac™ customers include:
- Johnson Matthey Catalyts
- Albenarte Catalyts
- Air Liquide
- Proctor and Gamble
- Pfizer
- Shell
- YARA

Products and Services
- Decommissioning
- Site restoration
- Waste management
- Waste disposal & transport
- Site characterisation

Company Information
Website address: www.structurevision.com
Address: Leeds Innovation Centre, 103 Clarendon Road, Leeds LS2 9DF
Phone: +44 845 166 2781
Fax: +44 870 126 3200
Email: info@structurevision.com

We work in partnership with our customers to deliver multi-disciplinary engineering and manufacturing expertise from one of the UK’s largest production facilities.

Tata Steel Projects

Brief Organisation profile
Tata Group comprises over 90 operating companies in seven business sectors: Communications and Information Technology / Engineering / Materials / Services / Energy / Consumer Products / Chemicals.
The group has operations in more than 80 countries across six continents. The total revenue of Tata companies, taken together, was $67.4 billion in 2009-10, with 57 per cent of this coming from business outside India. Tata companies employ around 400,000 people worldwide.

The group is one of the largest in the UK, incorporating:
- 2 x 5m pits
- 130t craneage
- 13m crane clearance

Products and Services
- Decommissioning
- Site restoration
- Waste management
- Waste disposal & transport
- Waste storage & transport

Company Information
Website address: www.tatasteelprojects.com
Address: Curwen Road, Werrient Howe, Worthington, Cumbria, CA14 3YX
Phone: +44 (0)1900 68000
Fax: +44 (0)1900 601111
Email: tip@tatasteel.com

We also offer a fully comprehensive test rig facility providing a design, construction, operation and testing service.

Tata Steel Projects have a long standing history of supplying nuclear waste transport and spent fuel flasks and are actively involved in producing effective solutions that improve processes, using value engineering and the latest technologies.

Projects have typically involved design, manufacture, testing and commissioning of waste storage, handling and decommissioning equipment, shield doors and gamma technology.

Experience/results, past clients
Tata Steel have supplied six transport flasks for the Tokyo Electric Company (TEPCO) in Japan. The total project was secured by a consortium comprising Sellafield Ltd. Manberi and Koba Steel.

Sellafield Ltd. is a major client of Tata Steel. Projects included: manufacture of flasks, gamma gates, test rings, control panels, shield doors, biopaque systems, handling equipment and lifting and transport frames.

We also have prestigious clients such as Rolls Royce and BAE Systems who are regular clients of Tata Steel, and have recently been awarded a contract from International Nuclear Services (INS) to manufacture six transport frames.

Tata Steel Projects

Tata Steel Projects have a long standing history of supplying nuclear waste transport and spent fuel flasks and are actively involved in producing effective solutions that improve processes, using value engineering and the latest technologies.

Projects have typically involved design, manufacture, testing and commissioning of waste storage, handling and decommissioning equipment, shield doors and gamma technology. Tata Steel Projects have a long standing history of supplying nuclear waste transport and spent fuel flasks and are actively involved in producing effective solutions that improve processes, using value engineering and the latest technologies.
Custom technology development company skilled at taking technology developed for other markets and applying them to nuclear decommissioning

**The Technology Partnership plc**

**Brief Organisation profile**
TTP is a specialist technology development company founded 25 years ago and employing some 300 skilled engineers and scientists located near Cambridge UK. We develop technologies for our customers in areas as diverse as medical devices, wireless communications, electromagnetic sensors, optics and lasers, biological instruments, high volume consumer goods and high performance electronics and computing. In nuclear we have recently done development work for key UK decommissioning tasks at Sellafield and for monitoring intermediate level nuclear waste in long term storage.

We are also interested to work on unique one-off problems such as Fukushima and because we specialize in development only we are happy to either manufacture small numbers of the devices we design ourselves or provide the design to other companies wanting to make larger numbers commercially.

**Main products/services or technologies**
Our main expertise is in Physics, mechanical and electrical/electronic engineering. As examples we have developed in-line sensors for solid particle size and number in materials as diverse as crude oil and chocolate. We have strong expertise in sonics and ultrasounds which is relevant to non destructive testing and controlled sludge mobilization and have advanced numerical simulation skills to model processes such as flow through porous media and settling. In optics we have produced low cost head-up displays able to project information into a person’s field of view while carrying out a decommissioning task and have developed 3D laser scanning systems which would be able to determine the arrangement of debris from a safe distance.

Our wireless communications group specializes in communications in difficult environments such as large concrete and steel structures enabling systems based on standard technology to work better in such environments. We also have a strong track record in low cost and disposable health monitoring devices.

**Products and Services**
- Decommissioning
- Post-operational clean-out (POCO)
- Decontamination
- Dismantling
- Waste management
- Waste storage & transport
- Site restoration
- Environmental remediation and material recovery

**Company Information**
Website address: www.ttp.com
Address: Melbourn Science Park, Cambridge Road, Melbourn, SG8 6EE, UK
Phone: +44 1763 262626
Fax: +44 1763 261582
Email: chris.holes@ttp.com

**Name of distributor/agent in Japan**
Hazuishi Watanabe
Address: 1-41-7 Sanno, Ota-ku, Tokyo 143-0023
Phone: +81 (0)3 3774 8791
Email: Hazuishi.watanabe@nifty.com

**Experience/results, past clients**
TTP currently does about 10% of its work for Japanese companies in Japan. We regularly travel to Japan on business and have Japanese speakers on staff.

Many of the companies we have worked for require confidentiality but companies we can cite as examples include: NEC, Zebra, Terumo, Panasonic, Rgobi, Fuji Film, Fumakilla, Canon, Daikin, Sharp, Horiba, Ricoh and Dai Nippon Screen.

**Products and Services**
- Decommissioning
- Post-operational clean-out (POCO)
- Decontamination
- Dismantling
- Waste management
- Waste storage & transport
- Site restoration

**Company Information**
Website address: www.tiscumbrialtd.com
Address: 5A Derwent Drive, Derwent Howe Industrial Estate, Workington, Cumbria, CA14 3YW
Phone: +44 (0)1900 65752
Fax: +44 (0)1900 601174
Email: enquiries@tiscumbrialtd.com

**Products and Services**
- Decommissioning
- Post-operational clean-out (POCO)
- Decontamination
- Dismantling
- Waste management
- Waste storage & transport
- Site restoration

**Company Information**
Website address: www.tiscumbrialtd.com
Address: 1-41-7 Sanno, Ota-ku, Tokyo 143-0023
Phone: +81 (0)3 3774 8791
Email: Hazuishi.watanabe@nifty.com

**Products and Services**
- Decommissioning
- Post-operational clean-out (POCO)
- Decontamination
- Dismantling
- Waste management
- Waste storage & transport
- Site restoration

**Products and Services**
- Decommissioning
- Post-operational clean-out (POCO)
- Decontamination
- Dismantling
- Waste management
- Waste storage & transport
- Site restoration

**Company Information**
Website address: www.tiscumbrialtd.com
Address: 5A Derwent Drive, Derwent Howe Industrial Estate, Workington, Cumbria, CA14 3YW
Phone: +44 (0)1900 65752
Fax: +44 (0)1900 601174
Email: enquiries@tiscumbrialtd.com

**Products and Services**
- Decommissioning
- Post-operational clean-out (POCO)
- Decontamination
- Dismantling
- Waste management
- Waste storage & transport
- Site restoration

**Company Information**
Website address: www.tiscumbrialtd.com
Address: 5A Derwent Drive, Derwent Howe Industrial Estate, Workington, Cumbria, CA14 3YW
Phone: +44 (0)1900 65752
Fax: +44 (0)1900 601174
Email: enquiries@tiscumbrialtd.com

**Experience/results, past clients**
Past and present clients include: Sellafield Limited, ABB UK, Doosan Babcock Services, Doosan Babcock Nuclear services, National Nuclear Limited, AMEC, Vinci Construction, Baltic UK TATA steel UK. Manufacture of Carbon steel and stainless steel Venturi assemblies for ABB UK - ABB Japan- Chiyoda, Testing of top side and sub sea assemblies through ABB UK for international customers.

Manufacture of complete decommissioning skid and shielding equipment complimented with a design capability office using Autocad 2011 Inventor and Autocad Solid 3D software. We have extensive experience in supplying and supporting the Nuclear sector with decommissioning solutions and others with high quality products with a proud record of apprentice training through the Nuclear Skills academy.

The company is managed by a team of engineers with extensive knowledge of engineering used daily in the Nuclear sector.

**Products and Services**
- Decommissioning
- Post-operational clean-out (POCO)
- Decontamination
- Dismantling
- Waste management
- Waste storage & transport
- Site restoration

**Company Information**
Website address: www.tiscumbrialtd.com
Address: 5A Derwent Drive, Derwent Howe Industrial Estate, Workington, Cumbria, CA14 3YW
Phone: +44 (0)1900 65752
Fax: +44 (0)1900 601174
Email: enquiries@tiscumbrialtd.com

**Main products/services or technologies**
TIS offers the following support to the Nuclear sector and others with services such as: Full manufacturing capability for both stainless and carbons steels. A comprehensive welding knowledge covering over 20 years experience of both pipework and fabrications in the Nuclear sector.

Training of welders up to current Nuclear standards.

Full QA and support with Non destructive testing facilities in house, with qualified NDT testing personnel for Ultrasonic testing, X and Gamma radiography, DPI, MPI, CSWP welding inspectors.

CNC machining, CNC pipe bending, full 3D CAD, qualified welding procedures in both carbon and stainless steels fabrications to ASME and BS with manual semi automatic and orbital welding.
Size reduction using high power, fibre-delivered, lasers, plus design and procedure development for remote sealing of high integrity waste containers

TWI Ltd

Main products/services or technologies
- By combining core expertise of welding engineering, advanced fabrication technology, asset management, structural integrity modelling and non-destructive examination, TWI has built up a significant capability in the design of nuclear waste containers and the technology to enable remote closure and sealing (by welding) of a loaded containers.
- Since the 1960s TWI has pioneered the use of lasers for cutting metals and has now proven the capability of this technology for use in nuclear decommissioning.
- Benefits offered by lasers compared to alternative techniques include:
  - Small lightweight process head
  - No reaction forces
  - Low fume generation
  - Minimal secondary wastes
  - Limited stand-off sensitivity
  - Capable of cutting up to 70mm thick steel and also 100mm concrete
  - Laser delivered via (up to 100m long) fibre optic cable so laser generator remains outside the nuclear environment.

Experience/results, past clients
- TWI has worked with companies throughout the global nuclear industry including utilities, nuclear site operators, fuel cycle companies, regulators and engineering contractors, completing over 800 separate nuclear projects in a period of 35 years.
- Decommissioning and waste management projects carried out with SCK, Nagra, Sellafield and the Nuclear Decommissioning Authority, Andra, US Yucca Mountain, IRWMC, Japan.
- In addition to its nuclear clients, TWI has also worked with Hitachi Ltd, Hitachi Zosen Corporation, IHI Corporation, Kawasaki Heavy Industries Ltd, Mitsubishi Heavy Industries, Toshiba, and Toyota Motor Corporation.

Brief Organisation profile
UCLan has an engineering history that dates back to the early 1800s. It became a university in 1992. UCLan Nuclear is the university’s centre for nuclear studies. Its Director is Professor Laurence Williams, F.R.Eng. (ex H.M. Chief Inspector, Office of Nuclear Regulation, HSE/NI). The centre has a unique mixture of academic and ex government and nuclear industry staff. Lecturers have extensive experience of working in the nuclear industry at senior levels including the Nuclear Decommissioning Authority, Office of Nuclear Regulation and BNFL. The centre has around 15 staff who support delivery of the nuclear undergraduate, postgraduate and CPD programmes. This group is further supported by other specialists who provide lecture support.

Main products/services or technologies
- UCLan offers a wide range of nuclear related courses which cover decommissioning, radioactive waste, dealing with stakeholders, disposal of radioactive waste, nuclear leadership and management, professionalism in the nuclear industry, nuclear safety, security and safeguards, and regulations. The courses can be tailored to fit all levels of knowledge from degree to postgraduate including Continuing Professional Development.
- In particular we have worked with the industry to provide bespoke courses as required for particular clients or sectors.
UniTech provides direct sales of nuclear PPE, garment and, respirator, scaffold and tool decontamination services. Mobile units are also available.

UniTech Services Group Ltd

**Brief Organisation profile**
UniTech Services Group has been providing critical decontamination services to the nuclear industry since 1976 and employs over 500 people in the UK, Western Europe and the US. A division of UniFirst Corporation a $1 Billion provider of uniforms and related services. UniTech has a focus of solving customer problems.

**Main products/services or technologies**
Nuclear and conventional laundry services including decontamination and service of respirators, nuclear protective garment design and manufacturing, the development of innovative radiological monitoring equipment.

**Experience/results, past clients**
Over 35 years specialists under contract nuclear decontamination and innovation serving over 80% of the NPP’s in the UK, US and Western Europe such as Magnox, EDF, Excelon, TVA, Energy Northwest, RWE, EON, Bruce Power, Candu, Songs, Westinghouse Electric to name a few.

**Products and Services**
- Post operation clean-up (POCO)
- Decontamination
- Decommissioning
- Fiscal management
- Waste management
- Decommissioning & Demolition
- Site restoration
- Accident management & Site support services

**Company Information**
- Website address: www.unitecheu.com
- Address: Unit 5 Oakwood Close, Crumlin, UK, NP11 3HY
- Phone: +44 (0) 1495249688
- Fax: +44 (0) 1495240982
- Email: ghall@unitecheu.com

---

URS is an international leader providing integrated engineering, construction, operational and technical services for public and private clients.

**Brief Organisation profile**
URS, through its acquired companies, has had a UK presence since 1924. Today we have 2,655 employees in the UK and a turnover of €2.53M. In the UK nuclear decommissioning and clean up sector, URS leads the organisations that are responsible for managing expenditure of more than £1 Billion for the British Government’s Nuclear Decommissioning Authority.

Globally, URS operates in 50 countries, has a total annual turnover of about £3.5 billion ($9 billion) and has around 57,000 employees, of which around 20,000 are engaged in the nuclear decommissioning and clean up business.

**Main products/services or technologies**
URS leads the organisations that are responsible for managing annual expenditure of over £3.4 billion on projects in the UK and US. In the UK, we lead the management of the Sellafield Sites and the Low Level Waste Repository for the NDA, and we are a partner managing the Dounreay site. In the US, URS leads the Hanford River Corridor Cleanup, Hanford Tank Operations, Savannah River Site Liquid Waste, East Tennessee Technology Park, National Energy Technology Laboratory and the Waste Isolation Pilot Plant. URS is also a partner on five other DoE projects and provides technical support to five of the US National Laboratories.

**Products and Services**
- Decommissioning
- Post operation clean-up (POCO)
- Decontamination
- Decommissioning & Demolition
- Waste management
- Waste processing, conditioning & passivation
- Waste storage & transport
- Waste disposal (fouling / repatriation)
- Site restoration
- De-energising & demolition
- Environmental remediation (land / groundwater)
- Post clean-up release surveys

**Company Information**
- Website address: www.ursglobal.com/uk/
- Address: Washington House, Birchwood Park Avenue, Birchwood, Warrington, Cheshire WA3 6GR
- Phone: +44 (0) 1925 854500
- Fax: +44 (0) 1925 854599
- Email: Robert.Bonner@urs.com

**Experience/results, past clients**
URS has been managing the operations and cleanup of high hazard, complex nuclear sites for three decades. Currently, URS is the lead organisation responsible for managing annual expenditure of over £3.4 billion on projects in the UK and US. In the UK, we lead the management of the Sellafield Sites and the Low Level Waste Repository for the NDA, and we are a partner managing the Dounreay site. In the US, URS leads the Hanford River Corridor Cleanup, Hanford Tank Operations, Savannah River Site Liquid Waste, East Tennessee Technology Park, National Energy Technology Laboratory and the Waste Isolation Pilot Plant. URS is also a partner on five other DoE projects and provides technical support to five of the US National Laboratories.
Vector Technology Group is a major single source supplier of high integrity sealing solutions for the most demanding industrial applications.

Brief Organisation profile
Vector Technology Group started business under the name of Steel Products Offshore in 1978. It changed its name to Vector International in 2003 following a merger with a UK company of that name, which itself was originally founded under the name of Techlok Limited in 1987.

The name of the company was changed to Vector Technology Group in 2011. The company has its main manufacturing sites in Port Talbot in the UK, and Drammen in Norway. There are also sales offices and manufacturing sites in Houston in the USA, and Kuala Lumpur in Malaysia, and sales offices in Rio de Janeiro in Brazil, and Perth in Australia.

The company has around 300 employees with sales revenue of 46 million euro in 2011 and forecast sales revenue of 75 million euro for 2012.

Main products/services or technologies
Vector Technology Group is a major single source supplier of high integrity sealing solutions. Products include SPG Compact Flanges, TECHLOK Clamp Connectors, FLANGELOCK Compact Flanges and OPTIMA Subsea Connectors. Supplementary products include H cutting devices, access hatches, structural clamps and flanges. Core product features include:
- High integrity sealing and minimisation of weight and space
- Reduced installation time and maintenance costs
- Suitability for use at high and low temperatures and pressures

For the Nuclear Industry, our experience includes: supply of Techlok clamp connectors, remote quick opening Powerlok connectors for decommissioning, and SPF Flanges to Nuclear facilities in Europe and the USA.

Other industries we supply to include Oil and Gas (Onshore, Offshore, and Subsea); Power Generation; Renewable Energy, Mining, Chemical, Hyperbaric Test Facilities, Gas Storage and Containment.

All of Vector’s connectors comply to ASME III and EN 13445, ASME VIII Div1, Div2, API and BS codes.

Key Vector engineering and sales staff have considerable experience of working in Japan in the engineering, energy, and environmental sectors.

Products and Services
Decommissioning
- POCO Strategy Development
- Decommissioning
- De-energising & demolition
- Waste management
- Waste planning, condition & planning
- Waste storage & transportation
- Waste disposal (remediation / repository)
- Site restoration
- Environmental remediation and post-decommissioning

Technical Consulting
- Power Station Decommissioning
- ALARP Assessments
- BAT (BPEO/BPM) Assessments and Audits
- Safety Case Assessments
- Waste Disposal Acceptance Criteria Evaluation
- Regulatory Support
- Independent Review / Verification
- Technical Optioning and Analytical Tools Development
- Assessment Technology Assessments
- POCO Strategy Development
- Integrated Waste Management
- Strategy Development
- Reactor Dismantling Optioning
- Environmental Impact Assessments
- Waste Accountancy / Estimation
- Waste Disposal in line with a waste hierarchy
- Waste Packaging, Treatment and Transportation Analysis

Venn provide the following typical services:
- Decommissioning Strategy and Planning
- Strategic Business Case Development
- Business Case Analytical Tools
- Programme/ Strategic Risk Management
- Project Support
- Definition and Production of Project Strategies
- Project Sanctioning and Validation
- Independent Estimate Reviews
- Front-end Engineering Definition i.e. scope, schedule and cost
- Value Engineering to drive out excess cost

Experience, results, past clients
Venn’s experienced workforce successfully deliver work to the following key clients: Japan Atomic Power Company (Tokai 1 Decommissioning planning)
- Nuclear Decommissioning Authority (NDA)
- British Energy/EDE
- Energy Solutions
- Magnox Ltd
- Areva
- VT Nuclear Services
- EBRD
- Interserve Ltd
- Sogin

Venn staff work on transitioning reactor sites, moving from operations into deactivating and decommissioning phases.

Venn’s personnel have developed reactor decommissioning plans for plant in Italy, Spain & USA including PWR, BWR & Magnox designs.

Venn Engineering Services Ltd

www.vennungineering.com

+44 (0)1453 820170

Email: enquiry@vennungineering.com

Venn Engineering are specialists in integrating nuclear waste & decommissioning projects, providing both Technical, Project Management and Project Controls services.
Brief Organisation profile

Westlakes Engineering are an award winning UK based SME established in 2004, with over 35 highly skilled and experienced personnel, and with access to many more specialist consultants and partners.

We are one of the UK’s top ten Civil Structural & Architectural Consultants within the Nuclear Sector, providing specialist support for the decommissioning of many high profile nuclear assets.

We have a proven track record of delivering a quality product, in line with Client requirements, to budget and programme. We make a concerted effort to accelerate and innovate, with an emphasis on the delivery of right first time solutions.

Fundamental to our approach are trust, honesty, openness and a collaborative approach to problem solving, and we collaborate with all of the major consultants and contractors who currently service the UK and global nuclear industry.

Main products/services or technologies

We are fully conversant with the nuclear design and decommissioning processes and procedures, and have successfully delivered designs & decommissioning solutions that have been subjected to intense scrutiny from the Regulators.

Our specific nuclear skills include:
- Optioneering & Value Engineering studies
- New Build – substructure, superstructure and infrastructure
- Structural Assessments of existing and degrading structures
- Care & Maintenance – Asset inspections and assessment of existing structures
- Design for decommissioning – we utilise lessons learned from previous decommissioning in new designs, to facilitate future decommissioning and potential re-use of the structure
- Decommissioning – Design and Assessment, from option development to temporary works design, including fault and accidental loading, seismic and impact analysis and assessment.

- Dismantling & Demolition – Assessments and method statements with regard to structural stability, containment and safe removal.
- Demolition – Assessment of structures and advice on civil structural related aspects of demolition
- Independent Technical Approvals & Peer Reviews
- Storage & Disposal – Design and assessment for waste management, storage and disposal facilities.

Experience/results, past clients

We have proven experience of delivering decommissioning and waste management projects. Our personnel are highly skilled, valued and trusted by our nuclear industry clients. We have extensive experience of delivering complex multi-disciplinary contracts for national and international Consultants and Clients including:
- Sellafield Limited Nuclear Licensed Site
- LLWR at Drigg Nuclear Licensed Site
- Magnox Limited
- Dounreay Nuclear Licensed Site
- Springfields Nuclear Licensed Site
- British Energy
- Radioactive Waste Management Directorate (formally UK Nirex)
- FANR (Federal Authority for Nuclear Regulation – Abu Dhabi)
- Amec
- Babcock
- Doosan Power Systems
- Westinghouse

Engineering with Integrity

Westlakes Engineering provide unrivalled specialist expertise and technical services to the nuclear industry, including design, decommissioning and waste management.

Westlakes Engineering

Products and Services

- Decommissioning
- Dismantling & Demolition
- Waste management
- Waste storage & transport
- Waste disposal (treatment & disposal)
- Site restoration
- Environmental investigations (site pre-qualifica

Company Information

Website address: www.westlakes.co.uk
Address: Galemire Court, Westlakes Science and Technology Park, Moor Row, Cumbria, CA24 3HY
Phone: +44 (0)1946 595550
Fax: +44 (0)1946 595551
Email: Andy.hooper@westlakes.co.uk

Company Information

Website address: www.westlakes.co.uk
Address: Galemire Court, Westlakes Science and Technology Park, Moor Row, Cumbria, CA24 3HY
Phone: +44 (0)1946 595550
Fax: +44 (0)1946 595551
Email: Andy.hooper@westlakes.co.uk
<table>
<thead>
<tr>
<th>Company (page number)</th>
<th>Decommissioning</th>
<th>Waste management</th>
<th>Site restoration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-operative clean-out (POCO)</td>
<td>Decontamination</td>
<td>Waste processing, conditioning &amp; passivation</td>
<td>Site radiological assessment &amp; material sorting</td>
</tr>
<tr>
<td>Dismantling</td>
<td>Waste storage &amp; transport</td>
<td>Waste-disposal (licensing / repository)</td>
<td>Environmental remediation (land / groundwater)</td>
</tr>
<tr>
<td>De-energising &amp; demolition</td>
<td></td>
<td></td>
<td>Post-clean-up release surveys</td>
</tr>
<tr>
<td>AMEC plc</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applied Seismology Consultants Ltd</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABEVA-ATKINS Partnership UK</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Article 13</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arvia Technology Ltd</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avon Protection</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Babcock International Group</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BHR Group</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brok UK Ltd</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C W Fletcher</td>
<td>23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carillion plc</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centronic Ltd</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSE-Controls Limited</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DBD Limited</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eden Nuclear and Environment Limited</td>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FORSCERVE FLOW CONTROL UK</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forth Engineering Cumbria Ltd</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Galson Sciences Ltd</td>
<td>31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HESCO Bastion Ltd</td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HR Wallingford</td>
<td>33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial Technology Systems Ltd (ITS)</td>
<td>34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informed Solutions</td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>James Fisher Nuclear Ltd</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JGC Engineering &amp; Technical Services Ltd</td>
<td>37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KDC Contractors Limited</td>
<td>38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land and Marine Project Engineering Limited</td>
<td>39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lloyd’s Register / Scandpower</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Logical Personnel Solutions Limited</td>
<td>41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matom Ltd</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCM International</td>
<td>43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mirion Technologies (IST) Ltd</td>
<td>44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mon Maintenance Services Ltd (MMS)</td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morson Projects Limited</td>
<td>46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Nuclear Laboratory</td>
<td>47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Physical Laboratory</td>
<td>48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NATIONAL SKILLS ACADEMY NUCLEAR</td>
<td>49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIS Limited</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nupro Ltd</td>
<td>51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NUCLEAR DECOMMISSIONING SERVICES LTD (NDS)</td>
<td>52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuclear Engineering Services Limited (NES)</td>
<td>53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuclear Technologies (A Division of FUY SUD UK) Limited</td>
<td>54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuclear Technology Education Consortium</td>
<td>55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QC Robotics</td>
<td>56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ove Arup &amp; Partners Hong Kong Ltd</td>
<td>57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provelio Nuclear Limited **</td>
<td>58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pursuit Dynamics PLC (PDS)</td>
<td>59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raddec International Ltd</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Redwise Limited</td>
<td>61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REACT Engineering Ltd</td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resonex International Limited</td>
<td>63</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risktec Solutions Limited</td>
<td>64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Savant Limited</td>
<td>65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shadow Robot Company Ltd</td>
<td>66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sound Mathematics Ltd **</td>
<td>67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structure Vision Ltd</td>
<td>68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tata Steel Projects</td>
<td>69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Technology Partnership plc</td>
<td>70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TIS Cumbria Limited</td>
<td>71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWI Ltd</td>
<td>72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UCLAN</td>
<td>73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UniTech Services Group Ltd</td>
<td>74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>URS</td>
<td>75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vector Technology Group - Industrial and Power Division</td>
<td>76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Venn Engineering Services Ltd</td>
<td>77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Westflakes Engineering</td>
<td>78</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A range of UK Government support is available from a portfolio of initiatives called Solutions for Business (SfB). The “solutions” are available to qualifying businesses, and cover everything from investment and grants through to specialist advice, collaborations and partnerships.

UK Trade & Investment is the Government Department that helps UK-based companies succeed in the global economy, and is responsible for the delivery of the SfB product “Helping Your Business Grow Internationally”.

We also help overseas companies bring their high-quality investment to the UK’s dynamic economy – acknowledged as Europe’s best place from which to succeed in global business.

UK Trade & Investment offers expertise and contacts through its extensive network of specialists in the UK, and in British embassies and other diplomatic offices around the world. We provide companies with the tools they require to be competitive on the world stage.

For further information please visit www.ukti.gov.uk or telephone +44 (0)20 7215 5000.

Whereas every effort has been made to ensure that the information given in this document is accurate, neither UK Trade & Investment nor its parent Departments (the Department for Business, Innovation and Skills, and the Foreign and Commonwealth Office) accept liability for any errors, omissions or misleading statements, and no warranty is given or responsibility accepted as to the standing of any individual, firm, company or other organisation mentioned.

Published January 2013 by UK Trade & Investment
© Crown Copyright