

INSIGHT

BUILD Magazine 'Most Innovative Designers' of 2016

Waldeck have been recognised by BUILD Magazine, as one of the national journal's winners to receive this years 'Most Innovative Designers' accolade.

The award is part of BUILD Magazines, annual signature awards programme, showcasing the best of the best from across the corporate world.

As one of the first technical and management consultancies to have recognised how the implementation of Building Information Modelling (BIM) adds un-rivalled value to projects, we have invested heavily in our people and technologies, including in-house training, the Waldeck BIM Academy and our Graduate Training Programme, in order to deliver market-leading solutions to our clients. All of this, and more, expresses our commitment to developing innovative, inventive technical solutions, to satisfy the interests of clients and create a sustainable enterprise that takes full advantage of what modern technology has to offer.

It is through our experience and extensive R&D investment that Waldeck have acquired unique knowledge in all fields of

digitally-based Enterprise Lifecycle Management Solutions.

Paul Waldeck, Founder and Director of Waldeck explained: "Our key driver is our market-leading BIM experience which we are able to interface with our client's Product Lifecycle Management systems, enabling us to provide solutions for a projects whole lifecycle – known as Enterprise Lifecycle Management.

Waldeck offer fully integrated BIM based Enterprise Lifecycle Management solutions way beyond what most people call BIM into the 7D zone, ensuring that we provide clients with models and data that are fit for purpose, at the agreed milestones."

Paul added: "We are extremely proud to be recognised by BUILD Magazine as 'Most Innovative Designers' of 2016 but we don't stand still, we are continually progressing with new technologies and ideas to stay at the cutting edge of the market to enhance the value and certainty that we can create to support our clients' successful investments by working collaboratively with them to get the strategy right for digital project delivery coupled with transparent modern methods of project assurance to measure the performance of the strategy as the project cycle unfolds."

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With digital at the heart of the business, our strapline; ‘Digital, Strategy, Consultancy, Solutions’ reinforces our core message and our position as market-leaders in digital strategy and solutions consultancy.

Waldeck reposition brand

Waldeck has recently updated its strap-line to reflect the continued evolution of the company, and the niche expertise and capabilities we offer clients, in the field of digital strategy and solutions.

The repositioning showcases an accurate description of the focus of the business, which reinforces our market-leading expertise in Building Information Modelling (BIM). The established, engineering focused strap-line ‘Consult, Design, Deliver’ will now be re-branded as ‘Digital, Strategy, Consultancy, Solutions’, highlighting the core fact that digital is at the forefront of everything we do.

DIGITAL

We are market leaders in Building Information Modelling, BIM taken to its true level in lifecycle surety and delivery. Digital, innovation and invention are our drivers, at the core of all our decisions and actions.

STRATEGY

We are leaders in digital based strategic and project implementation solutions for clients as proven by the world class projects and clients we are involved with, some of which are firsts in their respective markets, anywhere.

CONSULTANCY

Waldeck provide un-compromised advice and professional support services to create, design and manage high performance results for clients who are undertaking capital investment, acquisition, planning, design, development, construction, and refurbishment projects.

SOLUTIONS

We help clients consolidate, grow or transform their business’ and market positions by collaborating seamlessly with them.

In the early days, Waldeck were originally an engineering consultancy possessing some incredibly niche expertise in the fields of BIM and the design of “off-site manufactured” construction solutions.

The company has evolved significantly since then, and are now digital experts, that also happen to specialise in solutions for engineering led projects.

Waldeck are working on digital solutions for a series of industry firsts for world class blue chip clients in the markets of nuclear, energy from waste, logistics, industrial and manufacturing. Indeed, a number of “The Big Four” global advisory business’ have taken great interest in Waldeck’s views and expertise in digital assets and Enterprise Lifecycle Management Solutions and how they can be applied to the largest and the most complex construction projects internationally.

One observer from the global strategic consulting sector has said that “Waldeck are now the recognised brand in the BIM and digital project delivery space and it is clear that they have a major contribution to offer for critical elements of the overall business enterprise solution in their own right and we look forward to forging stronger collaborative opportunities to work together in the future across the markets.”

Hannah Wharton, Marketing and Communications Manager said: “With digital at the heart of the business, our new strap-line: ‘Digital, Strategy, Consultancy, Solutions’ further reinforces our message succinctly about what we do and highlights our position as a niche end to end specialist solutions business.”

To find out more about Waldeck’s core service offerings and marketing-leading capability, alongside our latest news please visit our website, which can be found at: www.waldeckconsulting.com.

Think piece: The construction industry is experiencing a digital revolution

The digital revolution continues to evolve, throughout the world, across all sectors, but with a significant reshaping in the engineering and construction industry.

As the pan-sector market undergoes its very own digital revolution, Waldeck discuss what we are doing and have been doing, in order to keep ahead of the curve when it comes to digital advances in this fast-paced sector.

With the transition from traditional paper-based drawings to high-resolution digital modelling, and beyond, Waldeck have been promoting digital-based strategy solutions as a core service for several years now to enhance the entire lifecycle of the capital investments for our diverse mix of private and global blue-chip clients. R&D, training and innovation is engrained in everything we do, as we continually look for better ways of doing things, transforming both the technologies we use and the cutting-edge solutions we deliver.

BUILDING INFORMATION MODELLING – BIM

From the outset, Waldeck had the foresight to adopt and promote digitally engineered project solutions, even before it was referred to as BIM, as an integral part of our offering to clients. We as a company therefore prefer to reduce the importance of the first letter when one refers to BIM and indeed, adopt an approach that is all about the 'IM' - Information Management of a digital asset.

The foundation stone of this concept is the development of an intelligent 3D digital model to provide end-to-end improved project delivery, data efficiency and added value to the client. However, many companies are still not yet aware of the technology available and how it can benefit their capital investments, including these to name but a few:

- **Improved Safety and Quality**
- **Certainty in Project Delivery and Commercial Intent**
- **Consistent Data and Configuration Management**
- **Transparency and Assurance**
- **Disputes Mitigation**

For a project to run smoothly it is important for all areas of the project team to work from the same Common Data Environment (CDE), having access to "live" models as they are updated. This ensures project efficiency across the entire lifecycle of a project. Although several years ago this was often a challenge, with the many digital advances we have seen, this is very achievable these days provided the strategy and rule-sets are established from the outset.

The next step for the construction industry is an effective 'BIM to Field' digital solution, which combines mobile field technologies for on-site use with cloud-based collaboration and reporting, an approach which Waldeck's R&D team in

conjunction with Huddersfield University are rapidly progressing testing of with the aim to bring to market in the next couple of months. This solution means that engineers can monitor the site works with a hand-held, fixed and UAV's to have real-time access to valuable as-built information and be able to correlate with the design model at the same time.

VIRTUAL AND AUGMENTED REALITY

Further enhancing our BIM expertise, Waldeck showcased our Augmented Reality (AR) capability at this years' Multimodal logistics show. Sections of our exhibition space came to life to show delegates wide tailed animations of complex logistics facilities at the swipe of a smart phone. The demonstration explained the interactive capabilities of BIM, such as how the digital tagging of assets can offer huge benefits through efficient facilities management and maintenance. This was a busy exhibition stand.

Another step in the evolution of digital, is Virtual Reality (VR), a solution that allows clients to take a step inside of their asset through a 3D model, simply by wearing VR headsets. This solution allows project teams and clients to step into a virtual world together in order to make changes to a design model in real-time, taking decision making and design revisions to the next level. It also helps with identity determination of key elements that require tagging so that 6D and 7D solutions can be created even more efficiently for Facilities Management.

CONCLUSION

The continuous evolution and advancements through digital for the construction industry provide benefits and value that were unimaginable as little as a decade ago. Waldeck are continually researching, developing, testing and implementing smarter approaches to digital solutions for our clients. Through these advances, the market can expect to see not only increased efficiency and reduced costs but a smoother delivery process through faster project approvals, enhanced interaction and compliance assured. Welcome to 21st Century tools.

There has never been a more exciting time to design and create building and infrastructure solutions!





I am delighted to be taking a lead on Waldeck's further expansion and the next phase of the company's evolution in the nuclear sector and I am really excited about the potential that this forward thinking consultancy can bring.

Waldeck appoint new nuclear Director

Nuclear expert, Sue Hewish and her unique team of other industry experts have joined Waldeck, to help expand our already rapidly growing presence and capability in the nuclear sector.

With nearly 30 years' experience in the industry, Sue has spent her career within the UK Nuclear New Build and Decommissioning Markets in the scientific aspects in her early career and then, capital projects and engineering consultancy in the past 15 years.

The other members of the team are ex-regulatory, nuclear site operations, nuclear projects, process design, cyber security, nuclear decommissioning and management whom, between them, have a combined experience of over 500 person-years in the nuclear sector.

Sue and the team joined Waldeck in September, bringing with them an immense knowledge and expertise to boost the company's profile and range within the sector.

Paul Waldeck, Founder and Director of Waldeck said: "With BIM set to play an increasingly important role in the Nuclear Industry and the current developments in Small Modular Reactors (SMRs), we see great opportunity for Waldeck to share our mutual knowledge and expertise with key players in the industry.

"Waldeck's BIM and Enterprise Lifecycle Management capabilities and expertise, in major nuclear programmes being aligned with the immense and diverse knowledge that Sue and her team possess, there is a fantastically seamless and complimentary fit that will enable us to compete with the largest global consultants across the whole nuclear spectrum.

"Sue will play a very active role within the company, continuing to build upon existing mutual client relationships and make new contacts, focusing in particular on Nuclear New Build and Decommissioning projects."

Sue Hewish, newly appointed Nuclear Director for Waldeck, said: "I am delighted to be taking a lead on Waldeck's further expansion and the next phase of the company's evolution in the nuclear sector and I am really excited about the potential that this forward thinking and proactive consultancy can bring to the market with the addition of yet further niche specialisms that our new combined nuclear team can offer."

Sue has worked on projects in the UK and interestingly, environmental works overseas such as decontamination work in the Ukraine and Belarus after the disaster at Chernobyl in 1986 and contamination risk mitigation at the Savannah River Site in South Carolina, which was built to refine nuclear materials.



Staff wellbeing is a top priority for all at Waldeck

Under Waldeck's Health & Safety First initiative, staff have stepped up and joined the Global Corporate Challenge (GCC), which started on 7th September 2016.

GCC is a fun and engaging programme with a goal to ensure better mental and physical health and improved engagement, productivity and team-working.

Waldeck have joined other companies from all over the world, on a 100 day virtual journey, increasing physical activity and improving diet and sleep patterns.

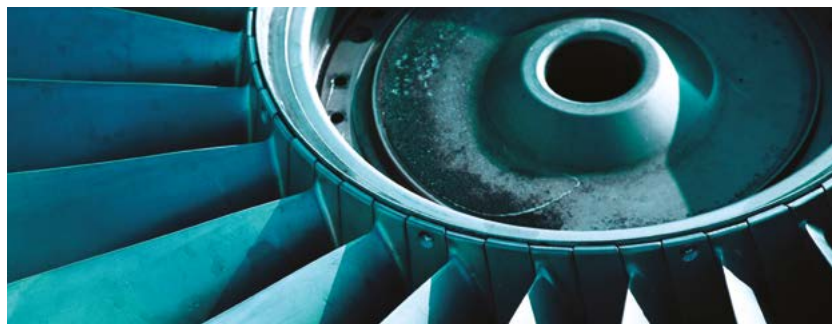
Competing in teams of seven, Waldeck staff aim to walk at least 10,000 steps each day, monitoring their activity using a GCC Pulse (pedometer) and entering their daily steps on the GCC app or GCC website.

The 100 day lifecycle, comprises of nutrition, balance and sleep, each stage contributing to the overall well-being of staff members.

GCC Nutrition provides weekly tailored advice, GCC Balance focuses on psychological well-being and GCC Sleep helps employees measure their quantity of sleep and how this affects mood.

Warren Monks, Safety, Health, Environment and Quality (SHEQ) Manager said: "Under our Health and Safety First umbrella, we have implemented GCC which will form part of the initiative that plays a key part in our health and well-being strategy."

Paul Waldeck, Founder and Director of Waldeck shared: "Our people are the forefront, and are the driving force of the business, so for me, GCC is a very important and an engaging way to keep employees motivated and healthy – and a little bit of friendly competition never hurt anyone."



Defence specialist joins Waldeck

Keith Skempton, has joined Waldeck providing consultancy and strategic advisory services, supporting the company's growth in the defence, manufacturing and logistic sectors.

Major General Keith Skempton, has over 30 years' wide-ranging experience in the British Army, initially serving with 1st Battalion in The Cheshire Regiment, which he commanded in 1990. He then went on to focus on operational logistics. With this experience, Keith also brings with him his vast knowledge and expertise, which will be used to further enhance Waldeck's profile in the logistics, defence and security sectors, interacting with the MOD and Armed Forces as well as defence manufacturers.

Sue Wright, Deputy MD and sector lead said: "Waldeck possess a successful track record working in this sector but it's great to have Keith on board to help us grow further in this specialist market which has some even deeper niche areas in turn that align so well with other current Waldeck activity."

Keith shared: "I am delighted to be involved in Waldeck's next phase of growth. The team possesses a fresh and modern approach to project delivery, both in attitude, organisational planning and in technical capability. Any organisation operating successful campaigns at the level of quality that they are, richly deserve the achievements secured thus far and gives me a fantastic platform to build upon."

Continued charity support by Waldeck

Throughout 2016, staff have been taking part in a variety of activities to help raise money for a number of worthy charities across the UK.

A total of over £600 has been raised during the summer period, through a range of activities including; Macmillan Coffee Morning, Jeans for Genes Dress Down Day, Euro's Sweepstake and an Olympic Themed Dress Down Day, to name a few.

With events planned up until the end of the year, Waldeck are confident that we will reach a total donation of over £1,000.

Other causes we have supported include; British Heart Foundation and Anthony Nolan charity.

In addition to in-house fundraising activities, Waldeck employees are also offered additional days leave to fulfil both fundraising and volunteering commitments within the community.

Charlotte Watson, a member of Waldeck's employee engagement committee shared: "Waldeck place a great deal of emphasis upon corporate social responsibility (CSR), which will continue into 2017 and beyond, supporting not only the larger national charities but also the smaller local ones in regions where our offices are located, or those charities that are close to the hearts of our employees. As part of our employee engagement committee, throughout 2017, we will also be supporting charities, such as; the British Heart Foundation, Children in Need, Comic Relief and CRASH."

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It's been great to have the opportunity to work so closely with experts in the field of BIM and Surveying at the University of Huddersfield.



Collaborative working with the University of Huddersfield – Digital Surveillance to BIM

Working in collaboration with the University of Huddersfield, Waldeck are launching a progressive data capture process, using Point Clouds and Photogrammetry.

The process, named 'Digital Surveillance to BIM', enables the comparison during construction of an assets as-built position against the retrospective 3D BIM design model.

In collaboration with the University of Huddersfield, Waldeck will use specialist aerial photogrammetry deployed from Unmanned Aerial Vehicles (UAV) to capture progressive on-site data, which will deliver substantial benefits for clients, across the entire lifecycle of a project.

To deliver this the team will be using drone based image capture software. This is used for monitoring and recording progress of specific assets on-site and allows deviations from a design to be highlighted in the overall reduction of construction errors. On completion, a live as-built digital model is handed over to the client for operation with certainty of accuracy. Through this process the 3D BIM model can be maintained and updated throughout the assets lifecycle.

Together these methods capture data that is more precise, efficient, economic and safer to gather in comparison to current common field-surveying methods, which until now, was new to the construction market.

Mark Greatrix, Lead BIM Consultant at Waldeck said: "It's been great to have the opportunity to work so closely with experts in the field of BIM and Surveying at the University of Huddersfield. As we know, digital is impacting in every industry, more specifically the construction sector, so together we conducted extensive research to deliver this totally digital based strategy solution for our clients. This process emphasises our commitment to R&D, training and innovation, as we constantly look for better ways of doing things, transforming both the technologies we use and the cutting-edge solutions we deliver."

Dr Song Wu, Professor of Surveying and IT at the University of Huddersfield said: "The drone based reality computing is one of the cutting edge technologies for construction industry, we are extremely excited to collaborate with Waldeck to transfer our research expertise and knowledge into a practical solution for the industry."



Waldeck provide M&E design services for green energy plant

Waldeck were commissioned to provide full Mechanical and Electrical (M&E) design services to RIBA Stage 4c for the delivery of a new green energy plant, which will generate 40MW of renewable electricity for homes and businesses in the UK.

Waldeck took the lead in rigorously planning and implementing the efficient build of this facility, with works including the designing of the lighting, power, data and telephone, containment system, HVAC water and public health services, fire alarms and protection systems.

Leveraging our BIM expertise, we ensured the accurate costing, build and long term maintenance of the facility, through the use of multiple 3D models and combining them into fully intelligent 3D tagged design models.

Through these 3D models, a significant number of benefits were achieved for the client:

- **Maximum accuracy and safety throughout the project, allowing engineers to accurately coordinate their services**
- **Strategic use of blended state-of-the-art software's to create the solution**
- **Provided an advanced solution to heat management**
- **Computer Aided Facilities Management (CAFM) capability for the plant lifecycle**

Construction on the energy plant started in 2015, this long-term investment for the UK will not only help to meet renewable energy targets but also the strengthening of the country's energy security.

Scheduled to enter commercial operation in mid-2017, the facility will burn over 335,000 tonnes of wood-waste annually.

It is important to note that energy from waste facilities such as this project, allow the transformation of residual waste into power and resource, this already accounts for 1.5% of the UK's electricity supply. By 2020 it could account for 6% of total UK electricity, making a significant contribution to our energy security. Supporting this goal, Waldeck work across both local and national schemes providing solutions for clients such as this one.

Industry 4.0 set to take the manufacturing sector by storm

Specialising in delivering high-value expertise in design management and execution of all types of manufacturing facilities, Waldeck are inspired by the concept, Industry 4.0, which is set to take the manufacturing sector by storm.

Having recently attended The Manufacturer Smart Factory Expo, in Birmingham, Waldeck gained valuable and innovative insights into this new digital concept. The Expo provided the opportunity to discuss the adoption of the very latest technologies and processes, Industry 4.0 being one of them.

BUT WHAT IS INDUSTRY 4.0?

Industry 4.0 is a digital connection of operations, where process and data can be integrated across multiple supply chains and product life cycles. This concept allows the manufacturing industry to achieve results that weren't possible 10 years ago, owing to the many advancements in technology over the past decade, which Waldeck continue to embrace.

SMART FACTORIES

Industry 4.0 introduces the 'Smart Factory', a solution which provides real-time operational awareness, flexible control and data-driven insights, enabling smarter decisions across the supply chain, a concept which Waldeck are at the forefront of with thanks to our cutting-edge digital project lifecycle approach.

CONCLUSION

In the future digital, and specifically in the Manufacturing sector the integration of this concept will continue to become more and more influential in creative design, allowing organisations to leverage new technologies which permits them to completely re-imagine their business model and enhance their construction and manufacturing processes.

Accordingly Waldeck, who have been embracing some of these advances in digital technology for the industrial sector for some considerable time already have placed great emphasis on in-house R&D, specifically around Design for Manufacture, Digitisation and Automation of work-flows, Data Analytics and The Internet of Things which connects everyone and everything.

Our commitment to open standards will be crucial to supporting Smart Factories where connected production systems will communicate with the design and models to facilitate an automated manufacturing process, breaking the existing technology boundaries.

Andrew Dent, Executive Director and sector lead, said "We look forward to announcing our contribution to a world first here and how we and the client team have taken the Waldeck digital 7D project solution into the ultimate smart space of 8D where the client can continually optimise their entire enterprise."



Waldeck speak at first Nuclear South West Conference

Waldeck's Nuclear Director, Sue Hewish and Bristol Director, Jason Walker spoke at the first conference of a newly launched business forum, Nuclear South West in September.

The conference allowed event attendees to take stock of all that is happening in the nuclear industry within the South West region and network with like-minded individuals across the sector.

Waldeck have a successful track record in the nuclear industry with their significant involvement in some of the world's largest construction projects. Sue Hewish, Waldeck Nuclear Director, addressed the audience with a Waldeck nuclear update, sharing details of Waldeck's role on Hinkley Point C, our position in the South West region and also introducing the audience to our recent expansion to a brand new office in Bristol.

Jason Walker shared with the audience an insight into Waldeck's leading expertise, capabilities and project experience in BIM and Enterprise Lifecycle Management Solutions for the nuclear industry explaining the importance of cradle to grave solutions in order to add value, create efficiencies and reduce risk for clients across the sector.

Nuclear Industry Association (NIA) Chief Executive, Tom Greatrex delivered the keynote speech at The Bristol Hotel on Tuesday 20th September, focussing on Nuclear Industry of the Future.

The conference audience also received updates on projects happening around the South West of England, including a Winfrith site decommissioning project and MOD's submarine enterprise.

Ahead of the conference, Sue Hewish was been involved closely with the Nuclear Business South West board, and looks forward to continuing this, and actively supporting the group.

The Nuclear South West Board will next meet on Friday 25th November.



Paul Waldeck talks BIM in the nuclear industry

With BIM set to play an increasingly important role in the Nuclear Industry, Paul Waldeck, Founder and Director of Waldeck, shared 'An Enterprise Approach to Strategic Applications for Nuclear' with two audiences at The Role of BIM in the Nuclear Industry events.

Starting at September's event in Warrington, Paul addressed the audience, showcasing the evolution of 2D through to 7D BIM, and later at the Bristol event on 29th September.

Paul Waldeck shared: "This event was a great opportunity for us to share our knowledge and expertise with key players in the industry. We showcased our BIM and Enterprise Lifecycle Management solutions capability and expertise, in major nuclear programmes, through one of our cutting-edge animations.

The animation took the audience through the development of traditional BIM into Enterprise Lifecycle Management from 2D CAD drawings through to pioneering 7D facilities management applications."

Waldeck see the future as digital and through our continuous advances in Building Information Modelling (BIM) technologies and capabilities, we are continuing to position ourselves as key players in the nuclear industry. This autumn sees Directors from across the business including Sue Hewish, Nuclear Director, Sue Wright, Deputy MD and Jason Walker, Bristol Director, with a very busy nuclear calendar, which includes:

- **Nuclear South West's Pre-Conference Dinner and Annual Conference**
- **NIA New Build Working Group Pre-Event Dinner and Meeting**
- **NIA Decommissioning and Existing Generation Working Group Event**
- **NI Central England Branch Dinner**
- **NDA Supply Chain Event**
- **NIA Nuclear – Powering the UK Conference**
- **NI and NIA Annual London Dinner**



Following Waldeck's involvement in the project for some time now, we are delighted to hear of the announcement from Government earlier this year.

Waldeck are delighted to hear Hinkley Point C get the go ahead from Government

Following the recent announcement, EDF Energy's Hinkley Point C project has been given the green light from Government.

The decision was made following a comprehensive review and a revised agreement with EDF, and Ministers will impose a new legal framework for future foreign investment in Britain's critical infrastructure, which will include nuclear energy and apply after Hinkley.

The decision means Hinkley will be the first nuclear reactor built in Britain in two decades.

As a technical specialist and management consultancy, we have already been involved with the project for the past four years as one of EDF Energy's four framework engineering firms. A team of Waldeck engineers have been working alongside EDF Energy on the Hinkley Point site in Somerset and from EDF Energy's offices in Bristol and London.

The Hinkley Point C site will host two nuclear reactors

capable of producing enough low carbon electricity to power around six million homes. The £18bn project is expected to create 25,000 job opportunities during the 10 years of construction and 900 permanent roles throughout its 60-year lifecycle.

Paul Waldeck, Founder and Director of Waldeck Consulting, said: "Following Waldeck's involvement in the project for some time now, we were delighted to hear of the announcement from Government."

Working alongside EDF, teams across our network of offices have previously worked on; site enabling works, management and co-ordination of minor works packages, revisions to main building, design of all temporary structures, BIM and site engineering.

Paul added: "The UK's nuclear industry is experiencing a rebirth, with Hinkley Point C setting a global standard for safe and sustainable nuclear power generation and will provide seven per cent of Britain's electricity needs for 60 years."

Top accreditation for Waldeck fighting cyber threats

Waldeck are pleased to announce that they have been awarded Cyber Essentials Certification, to fight against the ever growing cyber-crime in the UK.

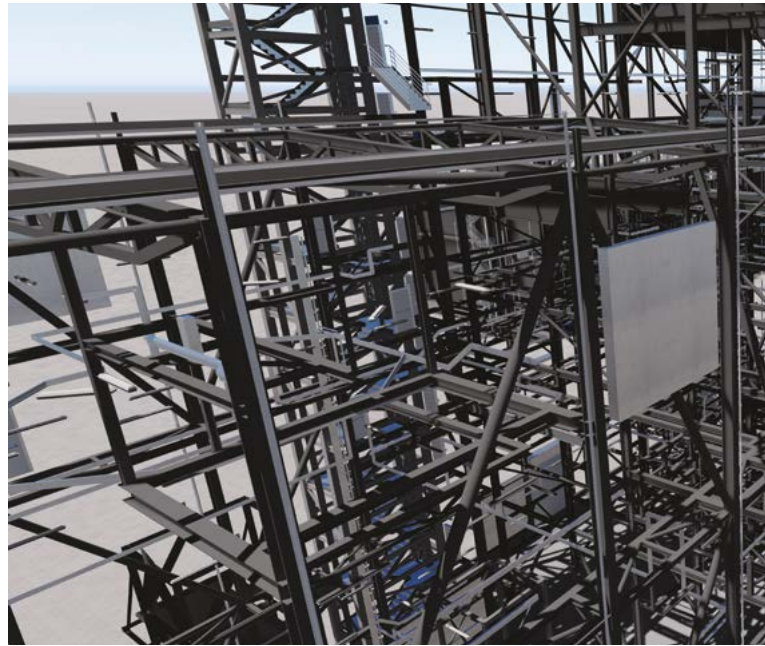
Cyber Essentials launched in 2014, is a government-backed and industry-supported scheme, designed to help guide businesses in protecting themselves from common online threats, such as phishing and hacking.

The certification forms part of the government's strategy and is only awarded to businesses that can demonstrate they have the necessary controls in place to fight against cyber-attacks. Waldeck implements controls throughout the company, which include; boundary firewalls and internet gateways, malware protection, patch management, access control and secure configuration.

Neil Gallagher, Head of IT and Innovations at Waldeck said; "We are continually working together to ensure our commitment to the security of our business is of a high standard and we are very proud to be awarded the Cyber Essentials Certification for our commitment.

Cyber-crime is growing increasingly sophisticated and the Certification assures our clients that we take it very seriously, and that we are continually looking for different ways to improve the security of our business."

Cyber Essentials aims to keep your business safe, offering a sound foundation of basic hygiene measures that all types of organisations can implement and potentially build upon.



Strategic BIM advice from Waldeck provides long-term value for major UK nuclear plant

In partnership with Cavendish Nuclear, Waldeck have been providing strategic BIM advice to a major UK nuclear plant to help achieve long-term efficiency savings.

Waldeck's BIM consultants have provided expert contribution to a strategic paper for a client, together with Cavendish Nuclear, as part of a large focus group for the major UK nuclear plant. The document, which engages with key stakeholders, explains how the client can implement BIM to ensure effective Enterprise Lifecycle Management, thus providing long-term efficiencies, enhanced safety and generate considerable cost savings in projects and programme streams.

THE CHALLENGE

Traditionally, the client had been working predominantly in 2D, and understood the growing need for the use of BIM to create digital models that were not only beneficial for the construction phase of a project, but also the maintenance, operations and decommissioning of a facility through the inclusion of data management and asset tagging.

OUR SOLUTION

As part of the select focus group, Waldeck have assessed the client's current status and BIM capability from project to operational level, outlining how to achieve efficiency savings through implementing a fully digital solution.

Waldeck continue to invest in staff training

Following the recent success of members of our Building Information Modelling (BIM) team, who were part of the first cohort to complete their Master's Degree in Building Information Modelling Management early this year, Waldeck are now supporting other employees through sponsorship to undertake the course in 2016/17.

James Thompson, one of our BIM Manager's based at our Newark Office, will be part of the next cohort to complete his Masters Degree in Building Information Modelling Management at Middlesex University.

James has not only worked on and provided input for several key and influential projects across the manufacturing and heavy industries sectors, but he is also instrumental to the innovative ideas behind Waldeck's pivotal BIM Steering Group. Developing James' BIM expertise further, the course will cover modules which include; Technical BIM Management, Operational BIM Management and Strategic BIM Management.

Each module will cover various aspects of BIM, from BIM Protocols, work-flows and BIM Execution Plans (BEP) to Quality Assurance (QA) and Health and Safety (H&S) procedures and creating, developing and implementing strategic plans for BIM implementation, to name a few.

The course, developed by Middlesex University was the UK's first work-based Masters with a BIM focus and aims to produce practitioners with a qualification to be BIM enabled in their discipline with a critical awareness of contemporary BIM issues. James and the other members of the cohort have a lot to live up to with his colleague Veronica Ruby gaining the first ever First in BIM Management. Good luck everyone!



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It is good to have the experts, Waldeck, help us hone and enhance our capabilities - Paul Colechin, Head of Civil, Structural & Architecture at Cavendish Nuclear

In order to successfully deliver this, Waldeck's bespoke services included:

- Advising on business benefits available through the optimised use of BIM within new plants, and technical and cultural considerations during the transition: The impact and integration of current legacy information was assessed and advice on future proofing provided.
- Making recommendations on up-skilling core members of the client's in-house team: In order to facilitate the required digital transformation.
- Outlining Asset Information Requirements (AIRs) which will benefit the whole lifecycle: Information on how to consolidate the client's current technology base, and transition to a master data management solution was provided.

As a result of Waldeck's contribution, benefits to the project include:

- Enhanced opportunities for CAPEX and lifecycle savings through clear instructions on how to implement a digital approach to client assets.
- Greater efficiencies across the facilities 60-70 year life span, with approximately 20% OPEX savings through improved maintenance.
- Reduced risk and improved safety for the entire project lifecycle from cradle to grave.

Nuclear innovators set out to change the energy sector's future

The Best of British Nuclear at Waldeck Consulting have teamed up to help Moltex Energy to develop their innovative technological solution to safer, cheaper and cleaner nuclear power, which has the potential to transform the global nuclear industry.

UK-based Moltex Energy have combined a major scientific breakthrough with the latest technology to enable the construction of Stable Salt Reactors (SSR), which will power the globe with safer, cheaper and cleaner energy. One other significant benefit of Moltex's SSRs is that they can use low-grade spent uranium fuel cells to generate power; and this cleans up what was toxic waste from old nuclear plants at the same time, obviating the need for its deep geological disposal in steel tanks at immense cost. This means that, in theory, the cost of building an SSR to generate energy could be significantly less than that of the current programme for dealing with the UK's existing spent fuel rods.

Moltex Energy's technology is currently generating considerable interest in the visual and print media both here and abroad, including in our national press, from Bloomberg and on the radio in the USA.

It is also fitting that Waldeck Consulting, another innovative UK company which has developed digital project delivery and lifecycle management solutions for heavy industries, including those in the nuclear sector, is working with Moltex Energy. Waldeck, a specialist multi-disciplinary technical and management consultancy is a market leader in digital-based strategic and implementation solutions for major and complex infrastructure projects. Furthermore, through its experience and extensive R&D investment, Waldeck has acquired unique knowledge in all fields of digitally-based Enterprise Lifecycle Management Solutions.

There is a natural synergy between the two companies since Waldeck has a proven track record in the nuclear arena through its involvement with some of the world's largest construction projects.

Dr Ian Scott, former chief scientist of Unilever and founding partner of Moltex Energy said: "It was a great privilege to introduce Moltex Stable Salt Reactor Technology (SSR) to the Waldeck team and we are delighted to have their strategic and technical support in our UK SSR development project.

Our reactors are a 'now' project: the SSR uses technology that has been perfected over the past 50 years by the nuclear industry, together with technology already deployed in solar power plants. Coupled with some clever adaptations and our



It has been a long time since I've seen such an incredible group of talent gathered in one place and, better still, all really got something stimulating and thought-provoking out of it...

own bespoke 21st century intellectual property we are able to create a safer, cheaper and cleaner solution to help to meet current and future global energy requirements."

Waldeck Founder and Managing Director, Paul Waldeck, who organised a summit for a high-powered group of experts and innovators last week, said: "We were so pleased to have the opportunity to host the Waldeck and Moltex Energy Seminar which showcased Moltex Energy's major scientific breakthrough to a forum of such esteemed individuals. Many of the attendees are not just best in class in a UK context but are also known and respected globally in a diverse range of subjects relating to nuclear science, including fuels, technology, safety, security, licensing, regulations compliance, construction, operations and decommissioning. So it was invaluable to combine this expertise with our own Digital Enterprise Lifecycle Management expertise and capabilities.

Moving forward, this group of friends and associates have now been united under the Waldeck umbrella to help Moltex Energy; and they also represent a unified and complementary fit which will enable us to compete with the biggest global consultancies across the whole nuclear spectrum."

Paul explained: "We recognise that tried and tested experience coupled with 21st century tools for the digitalisation of the nuclear industry will be crucial to the successful construction of nuclear facilities safely, to the necessary standards, and that are delivered on time and on budget: but this is just the start. A nuclear facility is a long term asset, and effective maintenance ensures it remains safe, efficient and commercially viable. Enterprise Lifecycle Management brings a digital approach from the construction phase through to technology that is used throughout the asset's lifecycle. This ensures significant cost savings and is also vital for efficient and safe decommissioning."

Dr David Bradbury, ex-chairman of the NIA's Decommissioning Working Group, who chaired the Summit, said "It has been a long time since I've seen such an incredible group of talent gathered in one place and, better still, all of us thoroughly enjoyed the event and really got something stimulating and thought-provoking out of it.

He continued, "It is extremely exciting for us all to be supporting great British innovators like Moltex and Waldeck in any way we can; and the fact that so many industry experts had assembled on their behalf, says an awful lot about those two firms, what they are trying to do, and the calibre of the people involved."



Waldeck exhibit at NDA Supply Chain Event for the third year running

This year's NDA Supply Chain Event took place on 3rd November for the 6th year running, playing host to 2000 delegates and nearly 300 exhibitors.

Waldeck, who exhibited for their 3rd year running, joined a variety of other industry experts from across the nuclear sector supply chain.

Exhibiting at what was a very busy stand B17, Waldeck showcased our BIM and Enterprise Lifecycle Management (ELM) solutions capability and expertise through one of our cutting-edge BIM animations. The animation showed stand visitors the evolution of 2D through to 7D BIM.

NDA's Chief Executive, John Clarke, opened the event emphasising that the nuclear industry as a whole must clean up the legacy of the past, as we are creating the future. John covered a variety of industry topics including:

STRONG SUPPLY CHAIN

John re-iterated that decommissioning will span decades and having a strong supply chain is vital for this process.

Waldeck are part of this supply chain, and have a strong commitment with our experts providing clients with valuable support in assisting with the decommissioning effort, both here in the UK and internationally.

SKILLS AND WORKFORCE

Having a skilled workforce is critical to the NDA mission and supporting the government's growth agenda, with apprenticeships and similar schemes pivotal to enhancing the skills and workforce in the industry – "skills are fundamental, it is all about people's individual and collective skills".

Taking a look forward to the up-coming workload across the nuclear sector – the Nation Skills Academy Nuclear (NSAN) plays a huge part in the development of skills across the sector.

DIVERSITY

John's discussion expressed the importance of opening ourselves up to ensuring that we access the widest possible groups of people we can.

Whilst increasing the number of women in nuclear is only one element of creating greater diversity across the sector, it is a key area that is focussed on across the engineering sector as a whole, and this can improve by creating greater diversity on panels, for example.

If the industry is serious about being inclusive and indifferent, there must be a focus on outcomes rather than input to bring about the sort of change we need, this should be a consideration when selecting people for jobs and explicitly include in that a degree of diversity that they will bring to the team.

RESEARCH AND DEVELOPMENT (R&D)

With R&D as an integral part of the creating solutions that are fit-for-purpose and innovative, the NDA spend £85million a year in this area, in order to provide solutions that shows real benefits, encourage transfer of knowledge and a development of skills across the nuclear sector.

The NDA Supply Chain Event showcases this commitment, providing companies with technical innovation, the opportunity to exhibit in a dedicated area known as the Innovation Zone, which is in its 2nd year running.

John was followed by a further keynote speech by Rear Admiral Keith Beckett, Director of Submarines, MOD and an afternoon of additional presentations from:

- **Andrew New, Magnox**
- **Melanie Brownridge and Derek Allen, Innovate UK**
- **Dawn Vinall, NSAN**
- **Christine Bruce, MOD, Ion Exchange Resins**
- **John Davis, MOD, Submarine Dismantling**
- **Martin Chown, Sellafield**
- **Stephen Adamson, Dounreay**
- **Tom Crowe, Low Level Waste Repository (LLWR)**
- **Jonathan Evans, Shared Services Alliances (SSA)**

Waldeck shortlisted for Builder and Engineer Awards again

We are pleased to announce that we have been shortlisted again for two national awards at the 2016 Builder and Engineer Awards.

Waldeck are shortlisted for 'Consultancy of the Year' and 'Training Initiative of the Year' at the prestigious awards ceremony, taking place at Anfield on 30th November. Sue Wright, Deputy MD at Waldeck, said: "With over 150 submissions this year, Waldeck are delighted to once again be short-listed for the Builder and Engineer Awards, which not only signifies the team's efforts and hard work over recent years, but also places particular emphasis on our market leading digital strategy expertise."

CONSULTANCY OF THE YEAR

It is an exciting time for Waldeck and our client base has continued to grow to include more major blue-chip companies, through the successful delivery of some of the most iconic and nationally important capital projects undertaken in recent years.

Our involvement with these clients, on an advisory and strategic management level, has lead Waldeck to reposition our offering in 2016 to deliver the following: Digital, Strategy, Consultancy, Solutions.

TRAINING INITIATIVE OF THE YEAR

Through our commitment to training and innovation, Waldeck developed a Graduate Training Scheme, which saw participants from across the UK and Europe embark on the course which includes a 12-week training programme, comprising of a combination of tailored classroom services, along with real life projects, across many different disciplines.

We recognised the skills gap in the engineering sector and through this scheme, we are preparing for the engineering of tomorrow, by developing our in-house training programme, in line with our digital market-leading expertise, and creating our future engineering leaders.

BUILDER AND ENGINEER AWARDS HISTORY

Since 2011, Waldeck have been recognised by the awards across many different categories, previously being crowned 'Consulting Engineer of the Year' in 2011 and being finalists in 2012, 2013, 2014 and 2015. The awards are one of the largest and most established awards programmes in the sector and continue to reward the hard work and creativity of those working in the construction industry.



Waldeck are in line for CIBSE Yorkshire Awards

Market-leading digital strategy and solutions consultancy, Waldeck, have been shortlisted in two categories for the upcoming CIBSE Yorkshire Awards.

The awards, which will take place for the first time this year, recognise the excellence of individuals, companies and projects across the building industry.

Waldeck are delighted to have been shortlisted for two awards categories, 'Building Performance Training Programme of the Year' and 'Commercial and Industry Project of the Year'.

Two of Waldeck's in-house training initiatives, our BIM Academy and Pinnacle Series, are in the running for winning the award for this years' Training Programme of the Year category.



We are thrilled to be shortlisted for two CIBSE Yorkshire awards and it is testament to the hard work and skill of our team...

Pinnacle Series is a productivity solution, provided by Excitech, was introduced to grow talent and share knowledge across the company, through on-the-job training, in conjunction with our dedicated in-house BIM Academy.

Waldeck's work on the major modernisation of Bentley Works, has also been shortlisted for an award, under the Commercial and Industry Project of the Year category. This modernisation involved the construction of a new purpose build engineering manufacturing workshop facility, where Waldeck showcased their BIM expertise and capabilities, by enabling services such as the gas extract system, to be installed to a high level.

Andy Inkson, Sheffield Business Unit Director said: "We are thrilled to be shortlisted for two CIBSE Yorkshire awards and it is testament to the hard work and skill of our team.

"I worked closely with the team, who were directly involved, from concept to completion, on the Bentley Works project, which ensured successful delivery of end user value, creating a safe working environment, as well as giving best value in the long term for the client."

The judging panel will include a number of industry experts and the winners will be announced at the Royal Armouries Museum in Leeds, on 18th November 2016.



**CIBSE
Yorkshire**



GENERAL ENQUIRIES

Contact: Charlotte Watson
enquiries@waldeckconsulting.com
Telephone: 08450 990285

BIM AND PROJECT ENQUIRIES

Contact: Andrew Dent
andrew.dent@waldeckconsulting.com
Telephone: 08450 990285

SALES ENQUIRIES / PR & MEDIA

Contact: Hannah Wharton
hannah.wharton@waldeckconsulting.com
Telephone: 01529 298055

CAREER OPPORTUNITIES

Contact: Janet Shrapel
enquiries@waldeckconsulting.com
Telephone: 08450 990285