

Morson Projects
www.morson-projects.co.uk

Waldeck Consulting
www.waldeckconsulting.com

ISSUE 7 | 2022

INSIGHT

Catch up with the
team and more:

- **Awards Wins**
- **Promotions & Welcomes**
- **Project Updates**
- **Framework News**
- **Industry Insights**



Waldeck



morson
projects

Ematics
CONTROL SYSTEMS ENGINEERS



The first handovers have now taken place at one of Waldeck's residential schemes at Majestic Way in Telford. This was the first handover of 7 units out of 39 units and the remainder will be handed over from now until April when the site will be complete.

Our team carried out Employer's Agent and Principal Designer roles on this scheme for The Wrekin Housing Group which was built by Living Space Housing.

28—
WHAT DOES
INNOVATION
MEAN TO US AS
THE BIA'S MOST
INNOVATIVE
CONSULTANCY?



24—
WOODSIDE CARE
VILLAGE PICKS
UP THE NATIONAL
LABC PEOPLE &
PLACE AWARD FOR
NEW HOUSING



12—
YOUNG
ACHIEVER
OF THE YEAR
INTERVIEW
HANNAH
COOK



"This year the Team Delivery Performance category which our team were shortlisted for, had just 6 other shortlisted teams, out of an incredible 55 nominees."

Waldeck team members shortlisted in HPC Excellence Awards

Congratulations to our Waldeck colleagues working on EDF Energy's Hinkley Point C (HPC) project, who were recently nominated and shortlisted as part of the Pools and Liners Team at the HPC Excellence Awards in the 'Team Delivery Performance' category.

Richard Sargent, (Pools and Liners Coordinator), Rob Mahoney (Pools and Liners Review and Acceptance Lead) and Dario Teixeira (Pools and Liners Review and Acceptance Lead) make up an integral part of the team which sits within the JDO (Joint Design Office) at HPC.

The team is tasked with managing the engineering configuration of all of the steel-fabricated tanks which are embedded within the buildings in the Nuclear Island at HPC.

Rob Mahoney, Pools and Liners Review and Acceptance Lead, explains more: "The tanks serve to protect the plant by acting as storage for various liquids which are integral to the safeguard systems during maintenance or accident scenarios. The tanks are manufactured as separate modules or panels in factories off-site and assembled together on site.

"During the manufacturing process many changes are required, both from the designer and the contractor, and it is the JDO Pools and Liners team who are responsible for acting as Intelligent Customer to ensure any nuclear safety impact is identified and managed, and the changes are incorporated into the configuration of the plant.

"The team is constantly striving to help the project achieve crucial milestones. We collectively use our experience and knowledge developed throughout our time working on the project to help solve challenging engineering queries, often with nuclear safety significance.

"Although we didn't win, it is with great appreciation that our efforts have been recognised as a contributing factor to the delivery of safety and success for the build of HPC."

The HPC Excellence Awards happen every year and have been running for 5 years. Judging took place over the course of September and October where nominees were collated and the shortlist decided.

This year the 'Team Delivery Performance' category which our team were shortlisted for, had just 6 other shortlisted teams, out of an incredible 55 nominees.

Three finalists were then taken forward to the Final which culminated in an awards ceremony on November 25th at Taunton County Cricket Club, Somerset. The judging panel was made up of EDF Energy Nuclear New Build (NNB) Directors and Leaders.

Congratulations to all the winners!





WALDECK WELCOME NEW ASSOCIATE DIRECTOR, WILL GREEN, TO OUR CIVIL & STRUCTURAL TEAM



We are delighted to have started the year by welcoming Associate Director, Will Green, to our Civil & Structural Engineering team.

Will shall be working alongside Director of Civil & Structural Engineering, Tim Leach and Associate Director, Sanjay Dhanani to lead our team of engineers and technicians located across the East Midlands. The team are currently involved in a broad range of exciting projects including:

- **West Midlands Interchange**
Rail freight terminal and adoptable road bridge design
- **Perry Barr Station**
The transport gateway to the 2022 Commonwealth Games
- **Power Park, Exeter**
A commercial and industrial development adjoining Exeter Airport

Will is a Chartered Civil Engineer with 25 years' experience predominately working on multi-disciplinary infrastructure projects including highways, rail and urban expansion projects.

Initially Will started his career in highways, before moving over to bridges, which then developed into Design Manager, Project Manager and Project Director roles over the past 10 years where he has led multi-disciplinary project teams of up to 50 staff.

This experience has given Will a broad range of experience in problem solving and managing the technical, commercial, risk, contractual, financial, programme, operational, resource, HSEQ aspects of projects.

Hi Will, welcome to the team! What made you choose to join Waldeck?

Thank you. What made me choose Waldeck was really down to a combination of 3 things: (1) The wide variety of civil engineering and infrastructure services coupled with the extended offering of it's sister company, Morson Projects; (2) Waldeck's focus on R&D and innovation at the centre of every project; (3) and meeting the Waldeck team beforehand that enabled me to get a better

understanding of the people I will be working with (and them of me!) and the culture of the company to ensure it was a true fit, which was very important to me.

What do you enjoy most about a career in engineering?

Where do I start. It never ceases to amaze me how much opportunity there is to get involved in such a varied and interesting range of projects, I never get bored. It might seem like a cliché but I am constantly learning new things all the time, even after 25 years in the industry. I also get a buzz out of collaborating with really great and clever people in our industry to find solutions for clients.

What are you most looking forward to getting stuck into?

I'm looking forward to leading teams on some of the exciting projects listed above for Waldeck, getting to know some of our clients and supporting the team in whatever way I can.

What else is there to know about you?

Over the last 7 years I have taken an active role in supporting staff with their professional development in my capacity as ICE Supervising Civil Engineer, Delegated Engineer, Mentor and ICE Reviewer, which is something I am very passionate about.

In my free time, after a 13-year break, I also returned back to running last year and I am now a member of a local running club and regularly participate in the Saturday morning park runs.

I've also recently relocated to the East Midlands, but I used to volunteer one evening each week at a local foodbank/community centre which is something I hope to be able to do again once I'm settled into my new job and home.

To find out more about how Will and our Civil & Structural Engineering team can support you on your next project, please don't hesitate to call 08450 990285.

CONGRATULATIONS TO WARREN MONKS AND KIRSTY TUNE ON THEIR RECENT PROMOTIONS TO PROJECT DIRECTORS

Please join us in congratulating Warren Monks and Kirsty Tune on their promotions to Project Directors within our Commercial & Risk Management team.

Graham Wright, Director of the team shares: "I am delighted to be able to share this fantastic news with colleagues and clients. Warren and Kirsty are extremely valuable to our business and their promotions are part of the continuous growth and evolution of our team, as well as their own impressive career journeys.

"The Commercial & Risk Management team has grown from 0 to 15 staff as we enter our sixth year in business and has recently been restructured to facilitate these two Project Director roles and support our on-going progression through new projects, clients and regions as we enter our fifth and best year yet!

"Warren will be focusing on the management of the team from an operations point of view as well as overseeing the Health & Safety and Quality Assurance for the wider business, whereas Kirsty will be driving the people and resource management of the team. This will enable me to focus on growing our business in new regions and expanding our service offerings to clients." We caught up with Warren and Kirsty to find out more.

Congratulations to you both! What career path has led you to where you are today?

KIRSTY: I started my career in the construction industry over 15 years ago, starting straight from A Levels I did my degree through day release to University. This, in my opinion is the best way in this industry, as you learn the most on the job!

Following several years in industry, I became Chartered in 2013 and have continued to grow as an individual and professional ever since. My experience has varied from residential, education and care including a secondment for three years working as a client in the dementia care sector.

WARREN: After joining Waldeck back in 2013 as Operations Manager I was later promoted to Head of Safety, Health, Environment and Quality (SHEQ) in 2016, before taking on a more client-facing role in the years to follow.

Alongside my core role, the changes in the CDM Regulations in 2015 introduced the role of Principal Designer which I took on to support the delivery of projects across the business. Throughout my time at Waldeck the Health & Safety side of my duties have evolved and were recently enhanced through completing my NEBOSH qualification and the addition of Jonathan O'Dowd to my team which has allowed us to provide a more comprehensive Health & Safety Consultancy offering to our clients, whilst also supporting the wider Waldeck engineering team on a range of high-profile multi-disciplinary projects.

You both have very different roles within the Commercial team, can you tell us more about what you will be doing in your new positions?

WARREN: Within the Commercial & Risk Management team I will be working to enhance our Health & Safety Consultancy offering for clients as well as looking after some of the department's management, particularly around accounts and operational functions.

Across the wider business I will be continuing to develop and deliver our offering as Principal Designer and looking to support the Waldeck team on any internal SHEQ issues.

KIRSTY: Along with continuing with my project involvement, I will also continue to help our business win work by growing our client relationships along with making new ones.



I will also be supporting the wider team on their projects and managing the teams resource requirements to ensure we are the productive, efficient and ready for more growth as a team.

What does this mean for clients and the Commercial team?

WARREN: For our clients it will mean business as usual, but with the reassurance that a senior member of the business is involved in their projects as well as being able to offer a wider scope of auditing should they require it. For the team it allows Graham Wright, our Director, to spend more time on business development and expanding both our client base and team members, while I look after the day-to-day running of operations.

KIRSTY: For our clients, I will now be able to have a greater involvement in understanding their business needs and aspirations and helping them to achieve these with the support of the wider team and business whilst still being a key day to day contact for their projects.

For the team, by having me managing the internal resource requirements and being more involvement in the various projects the team work on, we will all be able to work more efficiently and collaboratively to ensure we pass on our experiences so we can continue to improve our service to our clients.

What projects and markets are you focussing on for 2022?

WARREN: From a Principal Designer/Health & Safety perspective there are a couple of stand-out projects next year. West Midlands Interchange, which is a multi-discipline project, will be a flag-ship project for us as



Principal Designer and also requires our involvement in the Common Safety Method procedures required by Network Rail.

Another example of a project we are involved with is a 70nr unit Extra Care facility for Wrekin Housing Group at Newport. We will also be expanding our Employer's Agent and Principal Designer offering to markets within the Yorkshire, South West and North West regions as well as growing our in-house auditing capabilities.

KIRSTY: One key area I have a personal and professional interest in is the care sector, particularly following my secondment with a dementia care client, WCS Care Group a couple of years ago.

This particular client tested boundaries and actively promoted innovation within their designs which was a fantastic learning journey for me. I have a few great sites due to start on site next year and in particular I am looking forward to continuing to work with Wrekin Housing Group on their mixed-use scheme in Donnington, Telford consisting of 90nr affordable homes, a 76nr extra care scheme including a dementia cluster and 20nr retirement living apartments! Next year is looking to be very exciting!

To find out more about Waldeck's Commercial & Risk Management capability, please don't hesitate to get in touch with Graham, Kirsty or Warren by calling 08450 990285.

MEET THE TEAM:

AMY CHEESEMAM & VERONICA RUBY-LEWIS

Following several award successes and exciting client projects throughout 2021, we kick-started 2022 by catching up with two of the experts leading our award-winning Digital & Technologies team.



Amy Cheeseman
Head of Digital Capture

Amy has 16 years' experience in the engineering industry, delivering projects across the rail, logistics and infrastructure landscape.



Veronica Ruby-Lewis
Associate Director
Head of BIM Consultancy

Veronica has 19 years' experience in the engineering industry, delivering projects across the rail, nuclear, manufacturing and built environment landscape.

Veronica and Amy have over 35 years' industry experience between them and have a combined service at Waldeck of over 30 years.

Together they have been working with the wider business to implement Digital Capture and BIM Consultancy solutions into client projects to improve efficiencies, data quality and to leverage information through the intelligent handling and analysis of data.

As an example, this has seen them lead teams to:

- **Deliver BIM Strategy for the UK's largest nuclear new build project**
- **Implement BIM for huge automotive infrastructure projects**
- **Combine multiple data sources and live telemetry to create federated BIM models for ports**
- **Develop and integrate digital capture for marine and aviation engineering**
- **Digitalise masonry bridge condition inspections and development of asset viewing solution**

We caught up with Amy and Veronica to find out more:

Hi both! Congratulations on the recent award wins and shortlists! To start with, can you tell us a bit about your roles behind the scenes?

AMY: I lead Waldeck's Digital Capture delivery across the business, collaborating with clients and project teams alike to ensure all drone and terrestrial survey operations are conducted in-line with regulatory and project-based requirements.

I have recently been working on a number of technically challenging projects for Network Rail and most recently I have been supporting their bridge inspections R&D team with their aspirations to move towards a digital approach.

I'm also a qualified drone operator, with several years' experience in undertaking digital capture across a broad range of complex environments.

VERONICA: I lead the development of the BIM Strategy and its delivery to ISO 19650-2 across all Waldeck offices, collaborating with key stakeholders to support the implementation of the strategy, company standards, workflows, and procedures.

I also graduated from the UK's first work-based BIM focussed Masters and obtained an MSc degree in Building Information Modelling Management with the knowledge gained being implemented across our client's businesses standardising processes, protocols, and information requirements to successfully deliver projects time after time.

Over the last few years, I have been involved in many exciting projects, working with, and providing strategic multi-disciplinary BIM and digital asset lifecycle solutions to industry leaders in the nuclear, manufacturing, and environmental sectors. Most recently, supporting

Network Rail with their future aspirations and taking their vision of having a solution which supports a digital, data driven approach to the asset management of their 29,000+ bridge portfolio into a demonstratable working solution.

What are the main benefits you have seen from utilising Digital Capture & BIM Consultancy solutions within Waldeck's projects?

AMY: From a digital capture point of view, I would say being able to capture environments and engage clients with their projects in a variety of ways. The mixture of technologies we use enables us to always find the best way for clients and project stakeholders to interact and make the most of data. This not only gives them a better insight into their project, but also de-risks many aspects, and even more importantly since the onset of the pandemic has significantly reduced the need for site visits.

VERONICA: From a BIM Consultancy point of view, there is no greater satisfaction than being able to turn our client's visions for their assets into reality; helping organisations develop robust processes and workflows to improve performance, whilst generating value and delivering efficiency.

What has been your favourite project so far and why?

AMY: Whilst proud of what we have achieved on all our projects, and especially the Network Rail Panoptic Bridge Management project, my personal favourite has been the capture of two pilot boats for Dales Marine which were undergoing engine refits. Not only was it a great place to work on a dry dock with a beautiful view across the Clyde and lochs, but it was also fantastic to work in a new environment to get the highest quality data working in the complex and confined spaces

below deck. I enjoyed working very closely with our engineering team to understand how best to exploit the 3D data in specialist marine design software and develop new workflows, analysis, and outputs to support the design refit of vessels, as well as wider engineering applications in the aerospace and automotive engineering sectors.

VERONICA: For me, the Network Rail Panoptic Bridge Management project stands out. From the outset, Network Rail had very clear aspirations of what they wanted to achieve in this project. As the team (comprising stakeholders from Network Rail, Nottingham Trent University and Waldeck) continues to work through the scalability of the approach and solution overall, we are unravelling all the value adds which this work offers for the wider periphery of Network Rail stakeholders.

How can your teams experience help next clients?

AMY: From a digital capture point of view, I would say our experience across such a broad range of industries and environments means we can advise the best methods and outputs to suit a client's requirements. This ensures the client gets the right data to support their immediate project need, such as Scan to BIM, structural analysis, or construction verification. Additionally, we can also provide added value to their project with the data captured such as de-risking, assisting stakeholder engagement, and aid key decisions to be made, reducing costly issues, and eliminating potential schedule delays.

Similarly, our experience across the AEC industry combined with our digital capture expertise means we can leverage a variety of existing legacy data with capture outputs to deliver fully federated projects.

VERONICA: BIM is a core part of 'what we do' and Waldeck have been successfully delivering our client's projects in accordance with PAS 1192-2 for many years and have held BIM Level 2 Business Certification since 2017. With the introduction of ISO 19650-1 and 2 standards in 2018, Waldeck have readied ourselves and been awarded with ISO 19650-2:2018 certification demonstrating our business wide excellence and giving our client's confidence in the delivery of their BIM projects to this internationally recognised standard.

Although the ISO 19650 standards were formally released in 2018, we have only just started to see traction in projects requiring alignment to these new standards due to many of our public sector BIM projects being in-flight at the time of the launch. We therefore expect to see a lot more requests for delivery against these standards over the coming year(s), and our BIM Consultants have the knowledge and experience to provide support to client organisations and their supply chains to enable them to adopt and follow the processes and principles of BIM Level 2 to ISO 19650.

What's next for the team?

BOTH: Going into 2022, the Digital & Technologies team already look to have another busy but exciting year ahead, with projects planned that will see our team grow as we keep pushing the limits of our technologies team offering.

To find out more about our Digital & Technologies offering, please don't hesitate to contact Amy or Veronica by calling 08450 990285.

YOUNG ACHIEVER
OF THE YEAR INTERVIEW

HANNAH COOK

Following her recent award win as 'Young Achiever of the Year' at the Lincolnshire Construction and Property Awards, we caught up with Head of Marketing, Hannah Cook, to find out more about her journey so far:



Hi Hannah, congratulations on your award win!

Tell us a bit about your journey so far?

I joined Waldeck in 2015 just as I was completing my Masters in Marketing at the University of Lincoln, for which I received a distinction. (Previously working at a local Marketing Agency while I completed my course). I joined the Waldeck team as a Marketing & Business Development Assistant, later progressing to Marketing Manager and now Head of Marketing & Communications.

Waldeck was acquired by the Morson Group in 2019 and 6 months after the acquisition my skills were recognised internally and I was promoted to Head of Marketing for the three engineering businesses within the Group (Waldeck, Morson Projects and Ematics).

I am based between the Waldeck Head Office in Lincoln and the Morson Projects / Ematics Head Office in Manchester, but work closely with and often visit our other offices across the UK.

What does your role entail?

Typically, my role can be separated into two distinct roles:

1. External marketing and business development
Working closely with Senior Management at a strategic level throughout the business to lead and execute a successful plan across the marketing, brand and communication functions.

A core element of my role is to lead and maintain all elements of the marketing mix across the three businesses to drive growth and build brand awareness in our chosen sectors. Ensuring that the great work and talent of our team is show-cased to new and existing clients across our chosen markets.

Our omni-channel marketing mix includes social media, company website, SEO, corporate literature, news articles, newsletters, tailored campaigns, office branding, presentations, merchandise, capability documents, case studies, bid documents, templates, events, awards etc.

2. Internal communications and culture

A core part of my role also involves the internal communications and culture within the business. Within this role I make it a priority to look under the skin of the business, understand its strengths and weaknesses and champion the businesses values to drive the business forward.

YOUNG ACHIEVER OF THE YEAR INTERVIEW HANNAH COOK

Continued



"Due to the nature of our business no two days are the same and whilst planning and pro-activity are key, being flexible and able to react to the needs of clients and the wider team at the drop of a hat are also crucial."

This role has taken many forms over the past few years and has included leading and contributing to:

- **Successful induction and onboarding processes**
- **Demonstrating and ensuring we are a diverse, equal opportunities workplace**
- **Championing women within the engineering industry**
- **Delivering social value to the areas which we live and work in**
- **Supporting recruitment activities to bring in the best talent and 'grow our own'**
- **Enhancing internal communication and culture – including a huge shift to digital ways of working pre-pandemic**
- **Creating open conversations about mental health and sharing the tools available to staff**
- **Organising company events, conferences, socials, charity events etc**
- **Opening and moving our offices across the UK**

What do you enjoy most about your job?

Each day brings new challenges. Due to the nature of our business no two days are the same and whilst planning and pro-activity are key, being flexible and able to react to the needs of clients and the wider team at the drop of a hat are also crucial.

The thing I love most about my role is that I am quite creative but also very analytical and this role enables me to have a good balance between both! My priorities within my role are:

1. To deliver results for our business (financial, operational, and cultural)
2. Make a positive difference to the people I work with (clients, suppliers and colleagues)
3. Help the teams achieve success and be recognised for their expertise and hard work (which in turn drives points 1 and 2)

What does winning this award mean to you?

In my role, I am constantly focussing on the great work, stories and accomplishments of the technical teams and it is often easy to get engrossed in showcasing their achievements and working 'on' the business, making it easy forget about my own successes, goals and ambitions.

Support teams within organisations such as marketing, HR and finance are notorious for being 'overheads' in the construction industry, but people often forget that our companies wouldn't be able to succeed without these core functions. These functions help the business operate but also add that softer side to a business that can add feelings of passion, pride and belonging which are important to everyone's happiness at work. As an industry I feel this is something we are finally embracing.

Alongside my career at Waldeck, I also manage family life with my husband and two young step-children. Though not a conventional 'family set-up' it is a juggling act managing a complex family life with forging a career, running a home, studying and I want to show women (and especially my nine year old step daughter) that it is possible to do it all if you work hard... even in a male dominated industry!

What's next?

I am currently waiting for my new grading with the Chartered Institute of Marketing having previously been an Associate Member and would like to work towards becoming Chartered.

Most importantly for me, I am currently writing my proposal to begin a PhD at the University of Lincoln. It is something I have been drafting and researching ideas for the past 18 months however due to workload I haven't been able to allocate the time necessary to dig deep into a topic area that I am truly passionate about.

Having completed my Masters in Lincoln, I hope to be able to carry out research in an area of the industry which can contribute significantly to the business school, wider industry and my role within the business. I would love to lecture one day and pass on my knowledge and experiences as I feel it's really important for students to get a balance between academia and real-life practice – the two don't always align 100%!



Also on the night Waldeck sponsored the Consultancy of the Year Award

Waldeck's Director of Civil & Structural Engineering, Tim Leach, handed over the trophy for 'Consultancy of the Year' to local experts in sustainable building services – Viridis Building Services Limited.

He shared: "It was fantastic for Waldeck to be able to sponsor the 'Consultancy of the Year' category at this years' awards having been crowned the winners back in 2020. And after no Lincolnshire Construction & Property Awards in 2021 due to the pandemic, it was even more of a delight to hand over the award to such worthy winners. Well done to all the team at Viridis, we wish you all the best for the coming year."



SERVICE SPOTLIGHT:

PEDESTRIAN FLOW MODELLING FOR RAIL STATIONS



Veronica Ruby-Lewis
Associate Director
Head of BIM Consultancy

Now more than ever, pedestrian flow modelling and analysis are paramount in the design phase of rail stations to ensure that pedestrian comfort and safety is maintained whilst crowds navigate the station environment.

Passengers have different needs and behave differently with any given station environment. They move about at different speeds and take different routes depending upon their passenger classification, i.e., commuter, leisure traveller, encumbered passenger (person with luggage, young children, bicycle etc), passenger in wheelchair or with reduced mobility.

Furthermore, train stations often serve a greater purpose than moving passengers from one location to another, they now generate prosperity in our economy by comprising retail and leisure outlets. With some stations offering short-cuts between two external locations thus generating additional footfall demands which need to be accommodated in station design or re-generation. All of which needs to be considered when planning.

We took a look at a recent example of where we used Pedestrian Flow Modelling as part of our multi-disciplinary design services at Perry Barr Station, to ensure all of the above was taken into consideration.



A major redevelopment is taking place at the existing Perry Barr Station in Birmingham as part of the regeneration of the surrounding area for the Commonwealth Games in 2022.

Waldeck are the lead design organisation providing full multi-disciplinary services on the scheme for Galliford Try who are the main contractor. As part of our involvement on the project, our team have provided Pedestrian Flow Modelling.

Pedestrian Flow Modelling was used to establish the suitability of the design option for predicted future demand forecast of 1.1 million passengers in 2027, which would see a 58% increase from the base flows.

Our Solution

Our team utilised Oasys Software's MassMotion to create a 3D model from the model created by our architectural team.

Simulations were set up and created to align with Perry Barr's peak train times, with Platform 1 and 2 trains arrival being 3 minutes apart with the passenger boarding and alighting demands taken from peak 3-hour survey data and factored by the 58%.

The model was stress-tested for a number of additional scenarios, including out of hours operations, event traffic, a degraded state such as when an entrance is out of use due to a malfunction or closed for safety reasons, provision of ticket barriers on peak trains and station design stress test determining maximum capacity of pedestrians during peak hours before elements are over stressed.

Pedestrian Flow Modelling has confirmed the suitability of the team's design at each GRIP stage and aided the streamlining of the scheme to suit budget and visual aspirations. In addition, the passive provision of gate lines was simulated aiding future development of the station should these be installed at a later date.



Associate Director, Veronica Ruby-Lewis answers some common questions:

Can Pedestrian Flow Modelling be used going forward for on-going flow management within the Station?

The station is in close proximity to Aston Villa Football Ground and anecdotal evidence identified a noticeable impact on the passenger flow at such times despite only a number of trains being affected by this. An initial event train scenario was run as part of the project determining stress points, this could be built upon with further scenarios and flow options run to aid station management for such frequent events and for special events taking place, such as the Commonwealth Games 2022.

In addition, should the station undergo future design changes, then it could be used to inform design, but also temporary station environment as a result of construction work.

Would you recommend Pedestrian Flow Modelling to clients?

Yes definitely. The algorithm behind the agent profile mimics that of a person in terms of behaviour and decision making to suit surroundings and scenarios. This therefore can translate and be utilised to benefit many different types of projects where mass movement of pedestrians is key to the design outcome.

The MassMotion software would be ideal for transport projects such as airports, bus depots, train stations, port terminals and so on, as well as event management for sporting and music events and large entertainment venues, such as stadiums, arenas, concert halls etc.

To find out more about how Pedestrian Flow Modelling can enhance your next project, please get in touch with Veronica and the team by calling 08450 990285.

CASE STUDY:

PROOF OF CONCEPT FOR NETWORK PLUS

Our team were approached by Network Plus to undertake a proof-of-concept project, leveraging digital capture technology to aid in the management of vegetation around key power infrastructure.



Project overview

Overhead power lines require continuous maintenance to ensure they are clear of vegetation to prevent damage and in turn disruption to power supplies. Currently this is done on a standardised maintenance schedule, with each single span of overhead power line classed as an asset.

On discussing Network Plus' requirements and understanding the large quantity of assets spread across large areas (and the unique environment of each), Waldeck proposed to undertake point cloud surveys to quickly capture detailed data and streamline the management of assets.

Our solution

Our team utilised LiDAR-based handheld Simultaneous Localisation and Mapping (SLAM) to quickly capture a sample of power line spans in differing environments.

Capture of data

Each span was scanned in under 2 minutes both before and after vegetation had been removed.

Although power was off to enable the removal of vegetation, the equipment in-use can be used safely without the need for access equipment or turning off power, minimising disruption to the public. With each capture processed in under 30 minutes, rich data sets were quickly turned around and ready for detailed analysis.

Visualise and analyse

Overlaying the before and after data sets, we were able to highlight the exact extent of vegetation removed at each site to easily visualise the works completed. From analysing the point cloud data, we could extract key metrics of each asset, such as distance of vegetation from the nearest conductor, and vegetation within a specified distance of the conductor.

On-going asset management Combining the data sets with our asset management system, spans could then be analysed within a secure cloud-based environment, facilitating a more methodical approach to managing vegetation maintenance at each span. Being able to remotely take accurate

measurements of key clearances to assets, growth rates can be applied to the surrounding vegetation to identify the time-frame for when vegetation will need to be removed. These time frames can then be used to programme targeted vegetation removal before it becomes a potential hazard to the network. Therefore, resources can be used more efficiently (compared to being deployed regardless of growth and clearances) to remove vegetation at each span on an annual basis.

Results

The proof-of-concept project demonstrated how using mobile SLAM technology to capture assets, combined with our cloud-based asset management solution, can enable more efficient and targeted maintenance of the power infrastructure network.

To find out more about our Digital Capture capability, get in touch with Amy Cheeseman, Head of Digital Capture by calling 08450 990285.

“We required a digital data capture proof-of-concept at short notice and contacted Waldeck who were quick to respond with their professional and knowledgeable staff. Who, recommending the best technical application for our purposes, conducted a detailed field trial which ultimately proved successful”.

— K Lee – Network Plus



WALDECK'S MECHANICAL & ELECTRICAL TEAM WELCOMES NEW APPRENTICE, BEN PREECE

We are delighted to have recently welcomed
Ben Preece to our busy Mechanical &
Electrical team, based in Sheffield.

Ben has joined the team as an Apprentice Mechanical Engineer having recently completed a Level 3 diploma in Mechanical Engineering at Barnsley College and will be working with us 4 days a week alongside 1 day a week at Leeds College of Building studying his HNC in Building Services Engineering.

We caught up with Ben to find out more about him and how he is settling in as part of the team.

Hi Ben, welcome to Waldeck! How have your first few weeks been?

Thank you, my first few weeks at Waldeck have been great! I have been working in the Sheffield office four days a week and have got to meet all the team.

I have been working on a new build prison workshop with the Director of M&E, Adam Machan, which has introduced me to sizing various systems that will go into the workshop and getting to know the software used for modelling and creating schematics e.g., CAD and Revit.

What made you choose a career in engineering?

My interest in being able to be a part of designing the future was the main reason I chose a career in engineering; I also wanted to be part of the process for designing and developing the systems in buildings to be as efficient as possible, sometimes before the building even exists.

What has been your favourite part about the job so far?

My favourite part of the job so far has been learning how to do various mechanical calculations that are relevant to building services and sizing equipment used in the design. I look forward to seeing these come to life as the projects come to fruition over the coming months.

Where do you see yourself heading over the next five years?

I am focusing on completing my education and once my HNC is complete, I will be working towards a Bachelor of Science at Leeds Beckett in Building Services, during this time I will hope to gain a lot of experience working alongside the team here at Sheffield that will help me eventually work towards Chartership through CIBSE.

Adam Machan, Director of the Mechanical & Electrical team at Waldeck added: "Ben has already started to become a valuable asset to our team within his short time at Waldeck and I wish him all the best as he continues his education and career journey within our team."

"Growing our own talent is a huge priority on our agenda over the coming months and as we look ahead to 2022. Ben's journey is just one of several successful routes into engineering and we look forward to welcoming other new starters to the business in the near future from Graduate level up to Senior Engineers."



US COMPANY, PHENIX SALON SUITES OPEN THEIR FIRST UK SALON

Waldeck have been supporting our client Apex Realty Limited, as they bring US brand 'Phenix Salon Suites' over to the UK from America.

Phenix Salon Suites are a long-established brand and franchise with locations set up all over America, priding themselves on providing Lifestyle Professionals with beautiful salon suites in a spa-like setting.

Throughout 2021, our Architecture & Digital Capture teams have been working closely with our client to assist the American company as they embarked on a journey to create their first UK salon at No.1 Deansgate, Manchester.

Our team have been providing services for the internal design, layout and delivery of this new unique business offering, supporting Phenix Salon Suites with the first steps of their ambitious plan to open at least 10 UK locations over the next two years.

More about Phenix Salon Suites

Phenix Salon Suites have developed an innovative approach in offering lifestyle professionals the opportunity to operate their business within a uniquely designed development. Phenix Salon Suites gives individual business owners the chance to run and own their business within a purposely built suite with size requirements to suit the varying needs of individuals within the industry.

Already a huge hit in the USA, with over 300 locations and partners including LL Cool J, over 50% of the 29 studios in Manchester have been leased and tenants include hair stylists, massage therapists, nail techs, skincare professionals and makeup artists.

Each unit has been totally personalised by its new tenants, with each small business owner given the option to decorate or brand it however they wish to create their very own space.

John Gillespie, Operations Director of the UK & Europe said: "We know how hard it is to set up a salon from scratch, and even more so when it comes to finding something affordable in the middle of an incredible city like Manchester. We wanted to make it accessible and achievable for anyone to create their own business, and so we've launched the very first Phenix here in Number One Deansgate, maybe one of the best addresses in the city!

"We chose Manchester as our first location here in the UK as it's already a leader in the hair and beauty industry. There are so many creatives and entrepreneurs, we knew immediately it was the right home for us."

Stuart Denniss, Director of Architecture at Waldeck, shares: "Phenix Salon Suites are bringing a unique offering to the UK and we are excited to be part of this important part of their journey with our client Apex Realty Ltd.

"The Waldeck team were chosen because of our past client experience and the team's proven delivery of A3 food and retail units for household names across the industry. "It's great to see the first of hopefully many salons open its doors."

To find out more about Waldeck's retail offering, please contact Stuart by calling 08450 990285.

WOODSIDE CARE VILLAGE PICKS UP THE NATIONAL LABC PEOPLE & PLACE AWARD FOR NEW HOUSING – BEST PURPOSE BUILT ACCOMMODATION

We are pleased to share that Woodside Care Village in Warwick, run by local charity WCS Care and constructed by Midlands-based Deeley Construction, has picked up the national LABC People & Place Award for New Housing – Best Purpose Built Accommodation, follow its recent win at regional level.



Waldeck were appointed by WCS Care as Project Managers, Employers Agent, Quantity Surveyors, Principal Designer and Clerk of Works on the innovative Warwickshire care home, which was designed to support adults with mobility needs, dementia and hearing loss.

Designed by Warwick-based Robothams, Woodside Care Village is a care home with 12 family-sized households, decorated in one of three lifestyles based on town, country and classical living. Up to seven people, who share similar care needs, interests and backgrounds, live together in each house, supported by a team of staff.

Two of the households are dedicated to the charity's deaf service, Deafinitely Independent, and are supported by staff trained in British Sign Language.

The village has its own spa, as well as an outdoor plaza – accessed by external walkways – featuring a hair salon, cinema, shop, launderette, and gardens with a bike track, outdoor gym equipment and water features.

Kirsty Tune, Associate Director – Head of Care at Waldeck, shared of our involvement: "To be able to undertake an enhanced project management role for this project on behalf of WCS care was a privilege and a pleasure.

"Waldeck's role went beyond the usual Employer's Agent role whereby we worked with the project team to create a unique and innovative care home that has helped WCS Care achieve their aspirations of creating a 'home away from home' for residents to enjoy.

"To see this project win the regional award was fantastic news and I am even more delighted that the project has now won the national awards."

Ed Russell, Chief Executive of WCS Care, said: "We're delighted that WCS Care's Woodside Care Village in Warwick has just been recognised for its innovative design and construction nationally by winning LABC's People & Place Award for New Housing – Best Purpose Built Accommodation. A huge thank you to everyone involved in building and designing the care home including Deeley Group, Waldeck, CLB and Robothams Architects, as well as our staff and residents who've made it a fantastic place to live and work.

"Design is fundamental to supporting us with our approach to care and we've challenged typical thinking about what a care home looks like. It means we're able to really focus on quality of life, providing plenty of opportunities for people to continue enjoying what they've always done."

To find out more about how Waldeck can support your next project, please don't hesitate to call Kirsty and the team on 08450 990285.



**‘BEST ASSET MANAGEMENT
INNOVATION’ WINNER:**

NETWORK RAIL PANOPTIC BRIDGE MANAGEMENT

We were delighted to be crowned ‘Best Asset Management Innovation’ Winner at the recent Building Innovation Awards for our Panoptic Bridge Management project with Network Rail and Nottingham Trent University.

The award was for our work to digitalise Network Rail’s approach to masonry bridge condition inspections. The technology driven solution focuses on lifecycle benefits, and the many ‘value adds’ which digital data can also provide for Network Rail’s wider stakeholders and teams.

Mark Greatrix, Director of Digital & Technologies at Waldeck shared: “Being able to support Network Rail with their future aspirations and to take their visions into demonstrable working solutions over the past two years has been a prestigious project for Waldeck. The project has been founded on a strong and collaborative working relationship, which has certainly enabled the teams to deliver the best results.

“As we continue to work through the scalability of the approach and solution overall, we are working with Network Rail to release all of the ‘value adds’ which the works offer for the wider periphery of Network Rail stakeholders. “We are delighted to have picked up the

award for ‘Best Asset Management Innovation’ which is a testament to the teams hard work, collaboration and application of the latest technologies.”

Find out more about the award-winning project below:

PROJECT OVERVIEW

The solution has been developed to support a digital, data driven approach to the asset management of their 29,000+ bridge portfolio, providing holistic and lifecycle benefits to Network Rail. The solution sees digital data supporting informed decision making for project engineers and asset care teams over the entirety of each bridge’s lifecycle, as well as supporting Network Rail’s ambition to create a ‘Digital Railway’.

The project has focused on digital means of data collection and the application of this data. The data is leveraged to support machine learning and artificial intelligence for condition assessments, automation of BIM models, and their aggregation into Network Rail’s ‘Digital Railway’ and asset management solution.

Following initial proof-of-concept trials, Waldeck and Nottingham Trent University are now on their 3rd project with Network Rail.

The beta development of the solution remains the focus of our latest project, which is also targeting the scalable deployment of the approach overall.

THE BRIEF

Network Rail’s aspirations are to digitalise the condition monitoring of their assets, enabling non-subjective and data led decision making. Working with key stakeholders, Waldeck have developed and actively deployed techniques which offer improvements over the current means of asset condition monitoring and assessments.

OUR SOLUTION

Focusing on employing a ‘golden thread’ approach to the data which is collected, the team worked collaboratively with Network Rail to understand the many limitations of the current methods, and how through a data-focussed approach this could be both improved and leveraged to provide wider reaching asset care benefits for Network Rail, as well as very much supporting their ‘Digital Railway’ aspirations.

Undertaking trials over a cross section of masonry bridge and viaduct assets, the team focussed on real-world application of digital

data collection and its use within an engineering environment.

The initial trials worked to understand how engineering decisions could be better informed through the use and analysis of digital data. The beta development of the solution remains the focus of the latest project, which is also targeting the scalable deployment of the approach overall.

RESULTS

The adoption of leading digital surveying technologies offered many benefits to the approach overall. Previously, individual photographs would be taken of defects which were they appended to reports with engineer’s annotation. Whilst these do provide individual instance snap shots of the defect, they fall short in offering and holistic view of the asset to better understand their location and frequency.

Capturing geolocated 360-degree data sets of the structure and its immediate surrounding area has enabled the viewing of high-definition imagery, which via point cloud technology has allowed measurable and comparable assessments to be made of each assets condition. These added benefits support progressive assessments, allowing

for accurate understanding of defect progression between surveys.

A key benefit of the approach considerably reduces the need for boots on ballast, which offers huge improvements from a health and safety perspective, enabling engineers to review and analyse the data remotely.

Working with these data sets has enabled the team to research and develop how machine learning techniques for object and defect recognition can also be integrated to support engineering assessments and the categorisation of the defects. The same approach has also enabled the team to explore visual programming techniques which automate the production of BIM Models from the survey data sets.

The project and technology utilised has led to wider conversations within Network Rail, seeing the team develop a bespoke asset viewing solution to maximise the engineering potential of this new approach.

Nataliya Aleksieva, Senior Engineer at Network Rail shared: “The trials undertaken by Waldeck and their university partner on 50 masonry bridges in 2020 were not only to demonstrate the capability of the technologies but also to

enable Network Rail engineers to holistically evaluate the condition of the structures off-site in their real environment. The project team were able to combine point cloud surveys undertaken by drones and terrestrial laser scanning with sufficient accuracy which provided a complete survey for the structures.

“The team has developed algorithms to create BIM models directly from the surveys to support the automation of the existing processes for determining the condition marking index for the structures and the development of the digital railway twin.

“This development is expected to bring significant benefits to Network Rail by minimising the traffic disruption, reducing boots on ballast, and obtaining richer data on our assets which will enable NR engineers to evaluate their condition more accurately.”

To find out more about Waldeck’s Digital Capture and Asset Management capability, please call the team on 08450 990285.





WHAT DOES INNOVATION MEAN TO US AS THE BIA'S MOST INNOVATIVE CONSULTANCY?

Having recently been crowned 'Most Innovative Consultancy' at the Building Innovation Awards, we took a deeper look into what innovation means for us as a business.

The award criteria focused on the use of innovation by consultants to ensure projects meet their technical specifications, come in on time and on budget, and are managed effectively in the long-term.

We caught up with the team to summarise some of our award submission answers:

1. How are you harnessing ground-breaking technology such as automation or the Internet of Things to bring efficiency and consistency to the design process?



Stuart Denniss, Director answered: As a company we strive for efficiencies, and automating tasks is therefore a core focus. We utilise and create digital data daily, and being smarter with how we

leverage that within our designs offers both time and resource benefits.

Working with visual programming software such as Dynamo and Python, we have enabled the automation of routine tasks within our design authoring packages. This runs from basic tasks such as setting up title sheets, templates, drawing views and annotations through to extremely complex algorithms which consists of 1000's of nodes to recognise and automate 3D Model objects from within vast point cloud data sets. The later posing time-based efficiencies over and above manual tracing of point cloud data to create 3D model objects.

Working with Network Rail on their digitalisation of infrastructure ambitions, we now deploy these scripts to automate BIM models within 20-30 seconds, compared with 5-6 hours of manual overlay and creation from

the point cloud data set. Further to this, we have worked closely with our engineers to develop machine learning techniques for object and defect recognition.

Once again this has been particularly useful on our rail projects where we are now able to allow the artificial intelligence to undertake the initial review of the assets via high resolution imagery. The machine will then identify and categorise the defects in line with the required standards.

This has presented a huge time efficiency, in such that our engineers now only undertake the validation and sign off of these automated reports.

Our automated and pre-planned flights for our drone surveys enable us to remotely plan the survey, ensuring we utilise the technologies extremely efficiently when we arrive at site. The rapid data collection this approach allows us, now sees us concluding surveys within minutes, rather than hours or days.

2. How are you helping to create greener buildings and infrastructure that are "future ready"?



Luke Mitchell, Associate Director for Mechanical & Electrical Engineering answered: Creating and delivering sustainable building design underpins every project we undertake. Waldeck's

functions through a successful and award-winning team who have a passion for providing exceptional design and consultancy to clients across the UK. Through specialist advice, we enable our clients to deliver projects with reduced environmental impact and buildings which focus on improving the health and wellbeing of occupants.

We take a 'whole life' approach, considering both the embodied and operational impacts of our projects, whilst driving clean construction, future proofing and performance verification.

We were recently winners of the CIBSE Yorkshire Project of the Year for IKEA's flagship eco retail store. This building is proof of future-ready M&E design by achieving the celebrated status of being named as the first retail unit to achieve BREEAM UK New Construction

WHAT DOES INNOVATION MEAN TO US AS THE BIA'S 'MOST INNOVATIVE CONSULTANCY'? Continued



Post Construction rating of over 90%. Additionally, the evaporative cooling system using recycled rainwater on the project also achieved accredited British Research Establishment (BRE) innovation recognition. This recognition is only awarded for exemplary performance and innovation that is not included within, or go beyond the requirements of the assessment criteria. Waldeck's innovative design knowledge and use of an evaporative cooling system using recycled rainwater created a significant impact on carbon emissions, energy use and of potable water usage.

Waldeck are extremely conscious that we work on buildings that have design lives of decades. Decades when society will have different needs and technologies will change, decades when climate change will bring more extreme weather and also a phase-down of fossil fuels. We evaluate four key aspects at the start of each project; carbon dioxide impact, occupant environment / wellbeing, technology and natural resource. By assessing these four prime factors of future variables, it allows us to always have a clear focus on maintaining a long lasting and sustainable built environment.

3. How are you integrating digital, data and design to improve the performance of an asset across its whole lifecycle?



Veronica Ruby, Associate Director of Digital & Technologies shared: Capturing existing data rapidly and efficiently has become a fundamental step in our design process. Not only does this de-risk our design process considerably, by enabling us to coordinate and base our design upon the correct information. It also enables us to capture, understand and progressively review assets across their lifecycle. This has presented a huge step change in how we

can accurately analyse assets condition over time, providing measurable and non-subjective viewpoints on them at any chosen moment in time.

This approach has also enabled us to retrospectively bring clients existing assets and infrastructure into the world of 3D. Developing data rich BIM models of environments and assets which only have 2D or paper legacy information has enabled clients to integrate far more of their portfolios and estates with new 3D data. This has been fundamental for our clients to better understand and manage their assets more effectively and efficiently. Being able to analyse and assess our clients' assets accurately over time, we have enabled them to reconsider maintenance regimes and focus efforts where they are required, rather than having to perform more reviews and assessments due to previously lack of quantifiable data.

Undertaking building physics assessments, for light, heating, ventilation, and even pedestrian flow has also been key to improving assets functionality and performance over its lifecycle. Within our designs, we can understand how lighting changes impact users and energy consumption. This is similar with our pedestrian flow analysis where we can optimise and plan internal spaces, accurately locating lifts, stairs, corridors, and furniture to where they aid and improve the user experience of the environment.

4. Tell us about your focus on training and upskilling your workforce to help employees bring new ideas to the table.



Hannah Cook, Head of Marketing & Communication shared: Although within the engineering industry the focus is often on project delivery and getting results for clients, we pride ourselves on looking inwards to our staff and ensuring they are working in an empowered culture where they are valued and nurtured. We work to ensure that Waldeck is a place where people want to work, can progress in their career and can make a difference through new ideas and innovation.

We recently placed on the New Civil Engineer (NCE) 'Power List' as one of their top 100 companies to work.

At Waldeck, our people are at the heart of everything we do, as a service-based organisation, we support our people to explore their passions and unlock their potential through their development and training. Across our network of offices, development is key in encouraging our team to reach the next level in their career and be the best they can be.

Our Academy Programme, Graduate Scheme and Knowledge Transfer Partnership are just three examples of how we have recently nurtured up-and-coming talent, bringing in aspiring school and university leavers



"We work to ensure that Waldeck is a place where people want to work, can progress in their career and can make a difference through new ideas and innovation."

to the organisation and providing them with both training and a rigid support structure to ensure they excel within their chosen career.

Our commitment for training spreads beyond 'young talent' and we are committed to the learning and development of staff throughout the entirety of their career, including:

- Utilisation of external training providers
- Investing in the skills and capabilities of our employees, with an emphasis on the responsibility of each employee to take ownership of their own development
- Recruiting and training employees to have the skills, experience and commitment to meet our clients' and the organisation's current and future needs
- Supporting additional degrees, courses and Chartership routes
- Promoting and rewarding employees on the basis of merit

To find out more about how Waldeck can support your next project, please don't hesitate to get in touch with the team by calling 08450 990285.



WALDECK PROVIDE EXPERT TESTING FOR MAGICAD ON THEIR ROAD TO BECOME CIBSE VERIFIED

Associate Director from our Mechanical & Electrical team, Luke Mitchell CEng, was recently approached by CIBSE as a trusted neutral third-party to test MagiCAD's software, in order for it to be verified through CIBSE's new Software Verification Assessment (SVA).



CIBSE's Software Verification Assessment service provides independent testing of software systems used for specific design functions.

Working on areas where CIBSE calculation methods are the accepted industry standard – such as ductwork sizing – this new service runs a series of comparative checks to make sure software systems produce the results expected of the standard calculation methods.

Any software that has passed one of the CIBSE tests can then display the SVA logo, demonstrating that it has been rigorously tested and provides answers that can be trusted.

Luke, who is a Chartered Mechanical Engineer, was approached by CIBSE due to our team's in-house expertise in using the MagiCAD software and reputation for the high standard of work the team produce.

Luke shared: Luke Mitchell - Mechanical Building Services Engineer "I was thrilled to be trusted by CIBSE as a neutral party to get involved in the verification process for MagiCAD. The prestige of being invited to be part of the testing process is a testament to the great work our team produce.

"Myself and the team have a good relationship with MagiCAD and are known to them as competent users who optimise our application of the software. This meant that both MagiCAD and CIBSE could trust that I would know how to use the software correctly in order to provide an accurate report for their consideration when awarding verified status.

"The Software Verification Service doesn't provide testing for a whole software platform. It sets out a series of tests on specific calculation sets, such as ductwork and pipework calculations. As such, this process and relationship is on-going, now that the ventilation module has been assessed, we will move onto the piping and drainage modules in the near future."

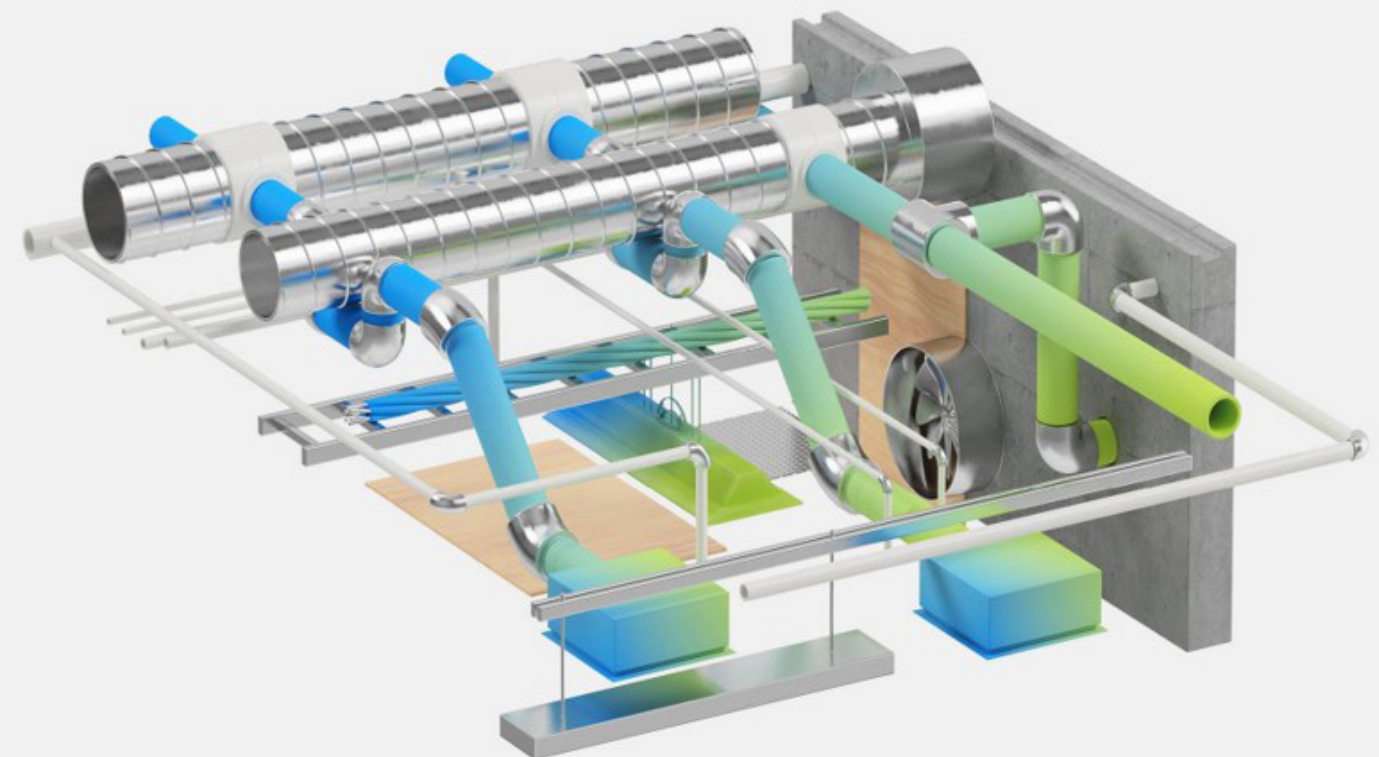
The objective of CIBSE's new scheme is to remove the time-wasting practice of multiple users doing their own testing individually. CIBSE, as an independent Professional Engineering Institution (PEI), has both the expertise and the authority for the conclusions of its testing process to be accepted across the sector.

To find out more about CIBSE's Software Verification Assessments, follow the link below:

<https://cibse.org/Society-of-Digital-Engineering-SDE/CIBSE-Software-Verification-Assessment#Certificates>

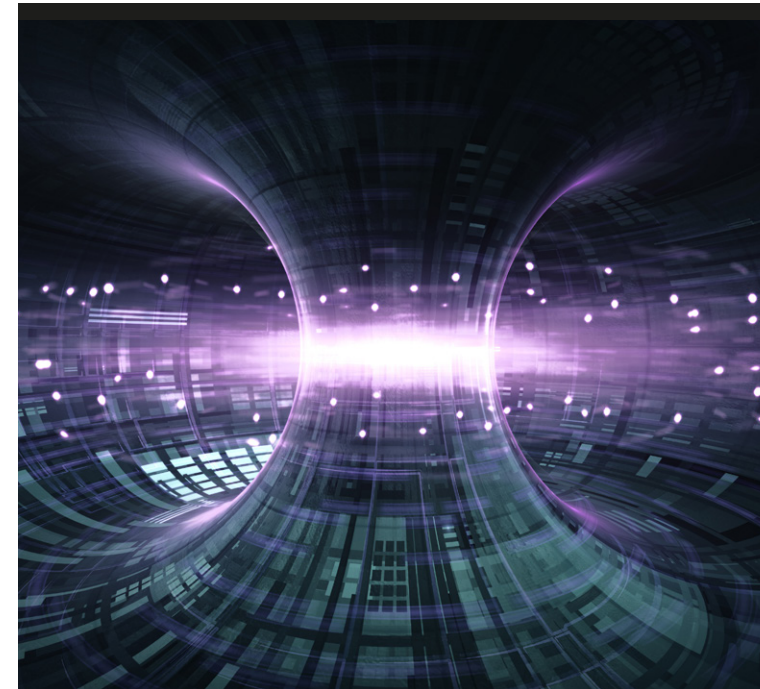
Or if you would like to know more about MagiCAD, a Revit plug-in that provides a range of BIM modelling and coordination tools, please follow the link below:
www.magicad.com/uk/

Caption Image?





38—
MORSON PROJECTS TEAM TO
SUPPORT GOVERNMENT-BACKED
ADCoSCA PROGRAMME



40—
MORSON
PROJECTS
APPOINTED
ON UKAEA
ENGINEERING
EMBEDDED
RESOURCE
FRAMEWORK

44—
INTERVIEW
WITH JOE &
JUSTIN FROM
OUR GRADUATE
DEVELOPMENT
PROGRAMME





MORSON GROUP ANNOUNCE CHOSEN CHARITIES TO SUPPORT IN 2022

Our parent company, Morson Group has announced that our chosen charities for 2022 will be Teenage Cancer Trust and Refuge.



Teenage Cancer Trust

Teenage Cancer Trust was selected by Morson Group CEO Ged Mason.

Seven young people are diagnosed with cancer every day in the UK. Teenage Cancer Trust is the only charity dedicated to providing specialist nursing care and support to these young people. They've built world-class specialist facilities in 28 hospitals across the UK, providing a home away from home for young people while they receive treatment. They also fund specialist nurses and youth support co-ordinators to support the young people in these units. They've been specially trained to understand what it's like to have cancer when you're young, giving support and helping young people to feel less isolated.

Their Nursing and Support Service aims to provide support for young people diagnosed with cancer regardless of the location in which they live. Their nursing and support pilot saw a team of 7 teenage and young adult cancer specialists working within NHS teams across Greater Manchester, Cheshire, Lancashire and South Cumbria to help them reach every young person with cancer across the region.



Refuge

The second of our 2022 charities was chosen by employees across the business. A shortlist of potential organisations was drawn up, and employees voted to decide the winner. For this year, it is Refuge.

Since 1971, Refuge has led the campaign against domestic violence and has grown to become the country's largest single provider of specialist domestic and gender-based violence services, supporting over 6,000 women and children on any given day. They are committed to a world where domestic violence and violence against women and girls is not tolerated and where women and children can live in safety.

They aim to empower women and children to rebuild their lives, free from violence and fear, and provide a range of life-saving and life-changing services, and a voice for the voiceless. In support of this approach, Refuge operates a three-pronged strategy across its strands of work. Refuge provides high-quality services for women and children who have experienced violence; protects women by advocating for a strong criminal justice response to perpetrators; and prevents future violence through education, training and awareness-raising.

acorns
Your local children's hospice

The new charity partnerships are Morson's first in two years. In January 2020, Morson employees voted to support Acorns Children's Hospice, a Midlands-based organisation, and KidsCan, a Salford-based cancer charity for their employee fundraising throughout the year. However, the coronavirus pandemic struck early in the year which resulted in all charity fundraising activity being shelved as the nation went into the first of several lockdowns. With the standard activities cancelled, Morson CEO Ged Mason presented a cheque for £40,000 to each charity at the Group's first-ever

virtual company awards ceremony in December 2020, and the partnership continued throughout 2021 to allow for further employee-led fundraising. This led to an additional £20,000 being raised.

We look forward to fundraising for these two fantastic charities, as well as supporting other local and national causes over the coming 12 months.

Find out more about Morson Group's commitment to charity and the community: www.morson.com

MORSON PROJECTS TEAM TO SUPPORT GOVERNMENT-BACKED ADCoSCA PROGRAMME

A team of engineers from Morson Projects will be supporting the new Advanced Design of Composites Structures for Future Combat Aircraft (ADCoSCA) programme as a select group of businesses come together to explore the art of the possible for the next generation of lightweight, strong and resilient combat aircraft utilising the advantages of composite materials.

The NCC and the Defence Science Technology Laboratory (Dstl) are leading the programme through their joint steering group and wider community, which brings together the greatest minds from academia, leading defence primes, SMEs and other parties outside of the traditional defence sector.

There are two primary aims of this joint ADCoSCA programme:

- To develop airframe design concepts through trades studies and worked examples
- To systematically collate and develop the underpinning data upon which the airframe design trades are built, including the performance of composite materials and features, and to identify and mitigate those features that are constraining performance and cost.

Syd Carson, Director at Morson Projects shares: "Morson Projects have over 40 years' experience delivering composite designs for the aerospace industry in the UK

and overseas. "We are delighted to have been selected as a trusted partner to support the NCC and Dstl as they seek to innovate, improve and deliver the next generation of UK aircraft capability.

"Our team have a real breadth of experience and knowledge built across many years of providing aerospace engineering consultancy and solutions for clients. This programme provides a fantastic platform for a group of our industry-leading engineers to look back at what we have previously achieved and apply our learnings from these projects to enhance the future of UK aircraft design."

"Our team have a real breadth of experience and knowledge built across many years of providing aerospace engineering consultancy and solutions for clients."

Stuart Donovan-Holmes, Head of Defence & Space at The National Composites Centre: "The NCC has selected Morson Projects, due to its wealth of expertise and clear ambition in supporting the vision of the ADCoSCA programme. Supporting our partner Dstl with delivering step changes in the technology used to enhance the military capability for our Front Line Commands."

More about the Programme

The UK needs to be at the forefront of cutting-edge technology with its defence and combat capabilities to support our national security interests, to protect our people, and to safeguard our prosperity. Investing in advanced research across the range of potential combat aircraft concepts is essential to ensure the defence and security needs of our front-line commands are met. This spans next-generation manned combat aircraft, unmanned adjuncts, and the associated range of development and procurement approaches.

Composites are used in all areas of modern society to make things lighter, stronger, smarter, more durable, and more sustainable. High performance vehicles including modern fighter jets and Formula 1 cars are 80% made from composite materials, which equates to 40% of the total weight for the jet and just 25% for the Formula 1 car. This proves just how effective composites are, however, we know that composite technologies still have a lot more to offer. The NCC and Dstl will innovate, push boundaries and exploit composite technologies for combat aircraft even further through this new partnership.

Find out more about the ADCoSCA programme: www.nccuk.com

Morson Projects appointed on UKAEA Engineering Embedded Resource Framework



"This is our second framework with UKAEA, after successfully collaborating with them and their wider stakeholders on previous engineering projects."

World-leading engineering and science experts have joined the UK Atomic Energy Authority on its mission to lead the delivery of sustainable fusion energy.

UKAEA signed two multimillion-pound framework agreements at the end of 2021 to aid the development of safe, efficient, and low-carbon fusion energy. Fusion has the potential to be a critical component in the global effort to tackle climate change.

Morson Projects are one of seven companies who are part of one of these two frameworks; their brand new £4 million, four-year Engineering Embedded Resource Framework agreement. We are joined by Assystem, Atkins, IDOM, NUVIA, EASL and Norton Straw Consultants, who together will cover fusion research, powerplant design, robotics, modelling, materials, and other specialist technology areas.

The framework will allow companies to embed their own specialists in project roles or add experience and expertise to UKAEA research into the development of fusion energy.

Paula Barham, UKAEA Head of Procurement, said: "Signing these two major framework agreements in the run up to Christmas was a big boost for UKAEA and our partners. Joining forces with such world-class organisations brings exciting opportunities for us to team-up with a wide range of experts, with this type of collaboration vital to UKAEA succeeding and positioning the UK as a leader in sustainable fusion energy."

Gary Stables, Engineering Contract Project Manager at UKAEA, added: "This is another example of how UKAEA works closely with its industrial partners to access resources as well as help develop the UK manufacturing supply chain in the push towards our goal of delivering fusion energy, which has huge potential as a low carbon energy source."

Andy Hartley, Project Manager at Morson Projects shared: "This is our second framework with UKAEA, after successfully collaborating with them and their wider stakeholders on previous engineering projects. This new framework is a great opportunity for us to support UKAEA in their mission to develop sustainable fusion energy, and we look forward to working alongside their expert team over the next four years to help them achieve this."

To find out more about Morson Project's nuclear and energy capabilities, please contact Andy on 0161 707 1516.

INCLUSIVE TRIPLE TREAD® TRICYCLE PROTOTYPE READY FOR TESTING

Over recent months, Morson Projects' Composite Design team have been supporting Triple Tread® with design elements for their brand-new upright tricycle.



The 'Triple Tread®' is designed to offer a different option of upright tricycle to the standard available within the market today, enabling inclusion for people who may find riding a bicycle difficult due to prosthetics or conditions such as MS or cerebral palsy.

We caught up with Mark Harrison, owner of Triple Tread®, to find out more.

Mark explains: "We want people to be able to enjoy independence, fun outdoors and freedom when riding Triple Tread® and we are grateful to Morson Projects for their support with the composite design work they have carried out for our prototype's unique composite spring suspension.

"We now have our prototype complete and ready for a test-ride, which we are delighted to have Andy Reid on-board for next week.

"Having the freedom to ride outdoors independently with family and friends can enrich our lives. Social inclusion is important to us and Triple Tread® can allow the rider to be seated at the same height as others on cycles.

"It is designed for the user experience. Instead of having to slow down to navigate corners in case of tipping, the Triple Tread® allows you to keep up with others on cycles so nobody is having to wait for you to catch up! You can have a sense of pride on your cool Triple Tread® trike.

"Importantly for us, style and function have driven the development of the tricycle so that it can appeal to all age groups. It offers independent suspension for its two front axles to maintain stability on uneven ground. Our patented Tiltahedron™ steering mechanism gives an intuitive, natural ride similar to the feeling of riding a standard bicycle. Where standard delta trikes can be prone to tipping when cornering due to a fixed wheelbase, Triple Tread® can corner at ease with stability."

"We look forward to seeing the tricycle in full action when we take it to a local track next week and also to sharing more with you about the reasoning and innovation behind the bike in an upcoming interview with Morson Projects."

The Morson Projects team had the opportunity to design and develop the composite spring suspension over the front axle, which are used to dampen the movement of the riders and irregularities in the ground to provide a safe and stable ride.



Graham Eardley, Principal Stress Engineer, explains more: "Our team took an initial metallic concept design and developed this to incorporate composite elements that can be adaptable for different riders or riding style.

"This was a unique opportunity for us to take a design from concept through design and analysis, manufacture and testing. During this process we worked with a composite manufacturer to source and layup material to our specified design, from which we were able to obtain a number of prototypes that undertook a series of load and deflection tests. These tests correlated well to our analytical approach, which allowed us to refine the design and the response of the overall spring system to optimise the performance of the tricycle.

"We are proud to have been involved in this project and are eager to see how our contribution to the design functions during the on-going test rides."

"Our team took an initial metallic concept design and developed this to incorporate composite elements that can be adaptable for different riders or riding style."

Find out more about Triple Tread® on their website: www.tripletread.com

ROUTES INTO ENGINEERING:

INTERVIEW WITH JOE & JUSTIN FROM OUR GRADUATE DEVELOPMENT PROGRAMME

As our industry continues to seek out the very best 'next generation' of engineers, we caught up with Justin and Joe in Brough, to find out more about their very different routes into engineering and how our Graduate Development Programme has been supporting their career aspirations.

Our Graduate Development Programme has been designed to attract and retain the best future talent in engineering to allow Morson Projects to continue to be a market leader in engineering design consultancy.

We do this by empowering our graduates to take ownership of their own continual professional development with a structured career path framework and a mentor scheme.

We caught up with Junior Design Engineer, Joe Moore, who is currently studying his HND at Hull College alongside his role at Morson Projects, and Graduate Design Engineer, Justin Bosworth, who joined the business full-time after completing his degree. Both joined the business in 2019.

Hi Joe and Justin! You started your engineering careers through very different routes, can you tell us a bit more about this?

JOE: Having just finished my A-levels in Maths, Physics and Geography, I was looking at options for universities when I became aware that Morson Projects were recruiting for their internal Graduate (and in my case, Pre-Graduate!) Development Programme.

My Dad, who also works for the company, recommended that joining the team could be a great route into becoming a Design Engineer, which was something I was already very interested in.

Following a successful interview process, I accepted a position as an Apprentice Design Engineer in 2019 and have been able to study for my degree (which is sponsored by Morson Projects) alongside my role, which has already enabled me to gain valuable experience in the industry and put theory into practice.

JUSTIN: I was quite late in life to decide to go to university! I was originally a Bar Manager, but when my now wife got pregnant in 2010, she had severe post-natal depression and the hours of the bar life just didn't suit what we needed as a new family.

I realised I was massively under-skilled with no qualifications, and it was at the time of the recession when I realised there wasn't much to offer in the job market.

This is when we decided as a family to make a leap of faith and I started university, taking a cut in pay to be a full-time student in the hope of a better future and work-life balance for my family.

It was a long process to get my skills up to scratch in my late 20's, I had to re-sit all my school exams at night classes with a new-born, followed by an access course taking two years.

Eventually, after just scraping getting onto a Foundation Degree I passed my degree in Mechanical & Energy Engineering with a First-Class Honours with the addition of 2 more children! I was also offered by the University to return to do a PhD, which I declined to come and work at Morson Projects under their Graduate Development Programme for a very competitive salary – which made it possible to consider this as an option.

What made you choose a career in engineering?

JOE: I have always been interested in engineering and was intending to study it at university before I came across this opportunity.

JUSTIN: Engineering has always been my dream career as it's something I have naturally taken an interest in. I used to strip down motorbikes with my Dad at a young age and it was in my adulthood I gained a hobby in

Justin [Left] and Joe [Right] outside our Brough Office



robotics – designing in CAD appears to be my favourite thing to do. It's massively rewarding being at the forefront of design and technology.

What has been your favourite part about the job so far job?

JOE: I have really enjoyed the variety to the work over the last two years. From day to day the job that you are working on can change massively, making for some interesting challenges. Everyone I have met, so far, that works for the company has been friendly and happy to work for Morson Projects with support and guidance readily available.

JUSTIN: The favourite part of this job has to be the variety of the work. And the satisfaction of producing something substantial. Morson Projects in general is a great company to work for. Everyone seems really happy to be working here which is a massive boost to morale.

But let's be honest, designing top tier aircraft, is a pretty cool job to have!

How have you found being part of our first cohort of our new Graduate Development Programme?

JOE: It has been really good to be involved in this process as it has been developed. This programme means that we will have a clear plan for our development and will be able to take our progression into our own hands. We can track our milestones and see areas that we need to improve further. I think this programme is also exciting for the company as a great tool to entice people to start a career in engineering.

JUSTIN: I have worked quite a few jobs in my time which had little or no progression, all positions were generally held by gate keepers. This programme has defined direction and progression and it's been so refreshing that the company are inclusive of older graduate looking for a career change.

All milestones are recorded and reviewed periodically. The Graduate Development Program also offers a mentor who can help meet the required criteria in order to advance my career, to eventually get recognised as a chartered engineer. The programme itself is highly refined, and it's pretty great Morson Projects care for employee personal growth and not just the company as a whole.

Where do you see yourself heading over the next five years?

JOE: In five years, I hope to have completed my degree in engineering and to have further progressed to become a more competent and capable Engineer. I am also really interested in some of the new projects that Morson Projects have got coming up in the future and hope to get an opportunity to work on some of these when the time comes!

JUSTIN: In five years' time, I will be a fully capable Design Engineer, and according to the milestones of the graduate programme I will be well on the way to covering all the criteria for Chartership.

I would also like to put back into the Graduate Development Programme what I gained; I would like to be a mentor at some point in the future.

GERRY MASON AND SCHOLARS FROM THE UNIVERSITY OF SALFORD EXPLORE FUTURE CAREER PATHS WITH OFFICE VISIT



We recently welcomed two cohorts of current Gerry Mason Scholars from The University of Salford to the Morson Projects HQ in Manchester.

The day aimed to introduce the twenty Scholars to their donors and explore the future career and employability opportunities available to them. The visit was also an opportunity to celebrate the success of previous scholars and alumni who now work for the Group.

The students then visited our Morson Group Head Office to meet with Founder, Ged Mason and representatives from the Mason family to thank them for their extraordinary generosity and honour Gerry's legacy.

Ged Mason OBE, CEO of the Morson Group said: "Each year we see a new cohort of Gerry Mason Scholars come through, and I know that my father would be incredibly proud to see the next generation of engineers develop their careers. Seeing their progress is inspiring and over the past six years, we've seen Scholars graduate and go to work across the whole engineering industry which makes our family proud. Some of our graduates have even gone on to work within our own business at Morson Projects which is great to see."

"Inviting our current Scholars to visit the business and showing them some of the career paths open to them is an important step in helping them plan out a career in engineering once they graduate – not to mention it's great to meet them, hear their stories and see how the scholarship has helped each of them."

Ronak Rasouli, a Computer Science student in her third year of study, spoke during the afternoon about the scholarship: "I'm doing my final year in Computer Science and Data Analytics and I'm so proud to be here. As a recipient of the Morson Scholarship, I'd like to thank the Mason family and Morson Group for awarding me

this scholarship. I was very excited when I found out I had been selected and I am honoured to be a part of this legacy Gerry Mason had established in 2015. I am appreciative of your supporting my education.

"Morson Group's scholarship has brought me peace of mind and happiness to my studies and encouraged me to be motivated and maintain mental and physical wellbeing during the pandemic. My main aim is to graduate and work as a data scientist in one of the prominent companies in the UK, the Morson Group

"I would like to take the harvest of my education to work in your company, to serve it back to those who supported me in my hardship. Finally, I would like to thank you on behalf of my fellow scholars for these incredible scholarships, our dream could become a reality at the University of Salford with your astonishing gift. We would love to thank you for encouraging us and caring for our futures through our scholarships which reflect on your company's values – courage, curiosity, care and collaboration."

Usaid Khan is in his second year studying Aircraft Engineering with Pilot Studies. He discussed how his initial uncertainty about his career journey has been aided by the scholarship: "I don't exactly come from a rich background, my parents emigrated here 16-18 years ago. When I was growing up, I didn't have any idea what I wanted to do. I bounced from one place to another deciding what I wanted to do and the subjects I wanted to study. I was originally going to go into pharmacy, which I didn't want to do. When I got into the whole engineering concept and found out about this degree and I got into Salford University; I started the course, I started flying and

everything was going smoothly. But there was a point where I was spending more time working to help my family. My mum and dad are retired and I was spending around 60 hours a week working and I didn't have enough to pay for my education.

"Obviously, I applied for the scholarship and had no faith I was going to get it, there was hundreds of people applying for it and that makes it so special. I got it and it was a huge, huge relief and that in turn helped me get a first in my first year of university and hopefully with the help of the scholarship and the help of you, I can get a first and hopefully work for you one day!"

"The Mason family and Morson Group are generous donors to the University of Salford and have created many life-changing projects that have contributed to the success of our students and graduates, the scholarship programme being one of many. The Gerry Mason Engineering Scholarship was launched by the late Morson Group Founder in 2015 with the vision of inspiring future engineers."

Joe Sweeney, Dean of the School of Science, Engineering and Environment said: "We are proud to have a long-standing relationship with the Morson Group and one that is continuously evolving to help young people achieve their ambitions. The scholarships have supported more than 40 students since it launched with industry visits being an important element of the journey."

"As well as financial support, the scholarships provide the students with mentoring opportunities, placements, and that all important contact with industry – all of which helps enhance student employability."

SCHOLAR SPOTLIGHT:

JAMES KELLY

SYSTEMS ENGINEER

Following the visit from this year's Gerry Mason Engineering Excellence Scholars, we caught up with previous scholar, James Kelly, who graduated from the University of Salford with a BEng in Petroleum Engineering in 2018.

After receiving a donor-funded scholarship on his journey to a career as a full-time Systems Engineer, James actually joined the Morson Projects team as a Graduate Engineer and is now working within our Power & Control Division.

How did being awarded the Gerry Mason scholarship help you while you were a student at Salford?

Having the scholarship helped take the pressure off me from a financial point of view and allowed me to maximise focus on my studies. This was a big aid throughout my studies but particularly in my third year which was the most time-consuming and intense of the three. As well as this, having the support of Morson and the Mason family provided more than enough motivation for my studies!

What brought you to Salford and what did you enjoy most?

I wanted to study Petroleum Engineering and there were not many Universities that offered this course. Once I had a look around Salford and heard feedback from students who had studied the course, I was confident Salford was the correct choice.

I enjoyed a lot about my time at Salford but the one thing that stands out from an academic perspective was gaining hands-on practical skills during my project in the final year. This was completely new and was driven by my own ideas for the project and I certainly enjoyed the challenge!

"As I was keen to start my career at Morson Projects, I utilised these connections to the full upon graduating, and not long after I was starting as a Graduate Engineer at Morson Projects."

Did you attend a placement at Morson whilst a student and how did this help you in thinking about your future career?

I had a one-week work experience at Morson Projects towards the end of my second year. The week was certainly eye-opening and gave me a good understanding of what the role of an engineer entails across various disciplines.

This helped me directly in my studies as it shaped the choices I made in my final year, but the variety and intricacy of the work I had witnessed at Morson Projects left me with the confidence that engineering (of some form!) was the right career choice for me. Thankfully, this is now something I get to be a part of every day.

How did the connections you made at Morson whilst a student help you into employment after University?

During my studies I was fortunate enough, through the scholarship, to meet various Morson employees. Ged and the Mason family took a personal interest in all of the scholars and that epitomises the Morson family ethos that runs through the group.

As I was keen to start my career at Morson Projects, I utilised these connections to the full upon graduating, and not long after I was starting as a Graduate Engineer at Morson Projects.

Can you give us a summary of your career to date and what is your current role?

As part of the Graduate programme, it was planned for me to move around various departments during my first couple of years at Morson Projects, to get a flavour for the various teams and disciplines within the business. However, after an initial few months working within the Civil team I moved to the 'Ematics' team within our Power & Control Division and recognised this was the right fit for me, so after discussion with senior management we made my role with this team permanent and I have stayed ever since!

The blend of engineering and computer science at Ematics really appealed to me, and a mixture of the fast-paced project environment and a management team that places a lot of trust in junior staff allowed me (and my colleagues) to develop our skills quickly.

I have been fortunate enough to gain experience in a variety of roles – from software engineering and testing to project and commercial management. Currently, my role is focussed on the latter, working on a major control system project for the rail infrastructure – our team is



delivering software to control the electrification of the railway network across the entire UK, due to complete in 2022.

How have you settled into work after graduation and how are Morson as an employer?

I worked for 3 months during each summer break at university and this is something I would recommend to any student. I think having that workplace experience, even in a non-engineering environment, helped me to settle into my new position. Of course, the work was challenging but Morson Projects has a positive, problem-solving ethos where knowledge is shared around the team to best facilitate the delivery of projects.

The workplace is fast-paced, and at Ematics we are used to major projects with challenging deadlines. It can be a lot of hard work, but the reward is a legacy of work that is critical for key national infrastructure.

What are your future career ambitions?

I hope to go on to have a long and successful career at Morson Projects, and continue to gain an understanding of all areas of the business from both a technical and commercial standpoint. Above all though, I hope to keep on enjoying myself!



SUPPORT GROWS FOR THE UNIVERSITY OF SALFORD'S RACING TEAM READY FOR 2022

We are delighted to share that we will be continuing our support for the University of Salford's racing team for another year.

The University's longstanding relationship with Morson Projects and the wider Morson Group has enabled Salford Racing to secure sponsorship, advice, resources and equipment; support which is set to continue over the next 12 months.

Andy Hassall, Business Development Director, shared: "As we enter our fifth year supporting the University through their Morson Maker Space and sponsorship of the team, we are pleased to have strengthened our assistance to their racing team through the additional offering of dynamic analysis and composite design training for the students throughout 2022.

"The training will include tailored workshops, mentoring and office visits for their engineering and media teams from experts within the Morson Projects team."

The Salford Racing team is a multi-disciplinary student society comprising of engineering, business, project management and media students. In a normal year the society has 25-30 members from a broad range of specialisms, providing both engineering knowledge and business expertise.

Together, the students work on designing and manufacturing a race car to compete in the IMechE Formula Student competition, Europe's most established student automotive event. The team are up against over 100 universities from around the globe, who meet at Silverstone once a year to pit their cars against one another.

Oliver Kanjoo-Parsons, Salford Racing Team Leader shared: "Salford Racing are excited to announce our strengthened relationship with Morson Projects. With their help and support, we will be able to excel, by developing the skillset and knowledge of our members, which is a key aspect of being within the Salford Racing team. "As the team enter our 3rd season of competing in the Class 1 division of Formula Student UK, we are excited to apply our focused attitude working with Morson Projects, to achieve our goals.

"Being closely affiliated with one of the world leaders in the engineering network, Morson Projects are an invaluable part to the success of Salford Racing."

Find out more about the Morson Maker Space:
www.salford.ac.uk/our-facilities/maker-space



MIKE GREEN SHARES DYNAMIC ANALYSIS EXPERTISE WITH SALFORD RACING STUDENTS



We recently welcomed a group of students from the University of Salford's Racing team to our office in Irlam as part of our on-going support.

The students met with Mike Green, Lead Stress Engineer, to learn more about dynamic analysis.

We caught up with Mike to find out more about how we are able to help the students with this specific element of their racing car design.

Hi Mike! Tell us a little bit more about your background?

I've been working at Morson Projects since 2006, originally mixing between on-site and off-site as a contractor. More recently I have joined the team in a permanent staff position.

Day-to-day my job entails the engineering analysis of a wide range of products from aircraft wings and engines to submarine structures and tooling assemblies.

How did you get involved in helping the students?

Our Business Development Director, Andy Hassall, contacted me as I'd been doing some Adams dynamic and mechanism analysis for one of Morson Projects' clients which he was aware of, and he saw an opportunity for us to use our expertise in the software to help the Salford Racing team as a result of this.

Adams is an MSC branded software tool used by many automotive companies to assess suspension design on products ranging from passenger cars and trucks to race motorcycles and Formula 1 cars.

Interestingly, my wife is actually a librarian at the University of Salford and in a previous role she was the Engineering Dept. subject librarian!

What will you / have you been showing the students?

In our initial session I showed the group how the Adams software could be used to model and improve their suspension design, focussing on spring rates and damping characteristics.

As the students continue to develop their design and use the software, we will set up sessions either online or face-to-face to mentor them and help with any queries or issues they may have. The flexibility is there to offer as much support as they need.

How will what you are showing the students help them?

For Formula Student, before a car can take to the track, they have to pass scrutineering, where they need to demonstrate how the car was designed, its safety features, etc. The Adams modelling can help to show that they have a roadworthy vehicle. The software can be used to predict many aspects of a design's performance, like how changing the suspension can affect the steering response and the magnitudes of forces applied to the chassis.

Below you can see an image from what we discussed in our session. We kept it very simple, but the principles demonstrated can be used to develop a highly accurate simulation of the vehicle performance.

THE ROAD TO NET ZERO

The 'Road to Net Zero' is one all businesses are responding to but at varying levels. As part of the Morson Group, our strategy is designed around our desire to meet our clients' needs for truly sustainable supply chains and lead the way in our field.

Our unique approach to environmental, social and governance (ESG) requirements, covers:

- **Proactively manage workplace risk**
- **Personal and professional development of our people**
- **Reducing carbon impact**
- **Commercial vehicle fuel partnership with Shell**
- **ISO Standards**
- **How we're working in partnership with our clients to achieve long-term sustainability goals**

Many organisations approach their ESG responsibilities via individual strategies, but this proves ineffective. The three elements feed into one core mission, so at Morson, we've created a strategy that places people, planet and profit centrally – and equally – to every aspect of our offering.

People are the bloodline of Morson, and we only want to work with, for and on behalf of the very best. So, we put great efforts into our personal and professional development programmes and regularly analyse our candidate attraction brand, engaging with our communities – schools, colleges, universities and SMEs – to hire from within our regions to create thriving local economies and to increase the value we add to society.

Processes are in place to minimise harm to our people – staff, contractors, candidates, clients, visitors and our supply chain – so we can proactively manage workplace risk, ensuring we implement only cost-effective,

agile solutions, thus creating an environment to help our people achieve their full potential. This might seem purely people-focused, but it actually feeds into our approach to protecting the planet, because we inherently rely on people to achieve our aims.

As a business, we've demonstrated our commitment to Government-driven environment and sustainability missions by pledging to achieve net zero on scopes 1 and 2 of carbon emissions by the end of 2023 – a milestone that is creeping ever closer. This is something that's particularly important to us, because we operate a large commercial vehicle fleet for certain client contracts. Our carbon footprint isn't just about people coming to and from work, it is central to our delivery and because we are one of few talent specialists to offer this service, we in turn have created a larger carbon footprint than many of our competitors. So, we focus on doing something about it.

David Robinson, Group Fleet Manager, has worked hard to reduce the company car emission levels through the introduction of ultra-low emission electric and hybrid vehicles, and had overseen the installation of additional infrastructure to support that, by adding charging points to our office car parks and at our various company HQs.

However, the majority of our commercial fleet is still made up of diesel vehicles and until better technology is developed to enable us to have electric and hybrid vehicles across 100% of our fleet, in the meantime we've committed to offset all commercial vehicle fuel

"There is no finish line in this mission. Instead, we must focus on always developing winning ESG strategies, and that's what the Morson Group does inherently well."

through a partnership with Shell. For every litre of fuel we purchase, we pay an additional amount to offset the carbon emissions from that litre of fuel, which means our commercial fleet – that collectively accounts for more than 80% of the Morson Group's carbon emissions – is now neutral in its operations.

We're also looking into how we can make greater efficiencies elsewhere in our business. For example, we've invested capital into LED lighting and motion sensors to reduce our energy consumption in meeting rooms, corridors and lifts which are vacant. We're looking at how we can generate more power on site, such as installing solar panels at our head office and in our office car parks, and we now issue our quarterly HSQE bulletins to staff, which feature the encouragement of greener behaviours around energy reduction, reduced consumption and waste reduction, including recycling.

Next on our 'Road to Net Zero' agenda, we are looking at reducing our carbon impact in line with scope 3 emissions, ensuring that everything we buy, hire or lease – whether for our own consumption, to develop our supply chain or to better that of our clients' – is reducing our environmental impact through the development of the circular economy. We're scouring the market for the best measurement and reporting technologies that will pinpoint the areas of the business we've not already identified as being carbon hotspots, so we can make big changes in those areas.

While clients are keen to know we're able to supply them with the

best talent and services and can support them in their mission to achieve a carbon neutral position alongside our own agenda, they're also keen for us to demonstrate how secure we are as a business when it comes to cyber security, business continuity and disaster recovery.

The road to net zero is one that must be ventured in partnership with those you work closely with, so for clients who are as focused on ESG as we are, we collaborate closely to achieve our long-term sustainability goals together. Rather than seeing future carbon challenges as a hindrance, we instead view them as a great chance to improve what we do. With every threat comes an opportunity, which is something we must never forget. Though climate change is a huge global issue, in response there will be technology and methods of renewable and carbon neutral power generation that are currently only brainwaves of inspiration, will soon become available to us, and we're in a prime position to capitalise on them, offering their benefits to our colleagues, clients and candidates.

There is no finish line in this mission. Instead, we must focus on always developing winning ESG strategies, and that's what the Morson Group does inherently well.

For more information about our Net Zero commitment please don't hesitate to call the team on 0161 707 1516.

