

Business Champions – launch interviews

The following questions have been developed as a structured interview to capture the approach and commitment of businesses across the sector to achieving Net Zero by 2050 in line with the COConstructZero priorities.

The interview can be captured in writing or filmed and shared with Stuart Young (Stuart.Young@beis.gov.uk) by the 15th of each month starting in April.

Interviewees are encouraged to provide photos and diagrams to illustrate their story, but also to keep to a concise response to the questions.

The interview and company logo will be featured on the CLC website and as part of your ongoing role as a business champion you will be invited to speak and share your story with your peers and Government stakeholders.

Construct Zero Priorities

Transport

1. Accelerating the shift of the construction workforce to **zero emission vehicles and onsite plant**
2. Maximising use of **Modern Methods of Construction** and improved onsite logistics, reducing waste and transport to sites
3. Championing developments and infrastructure investments that both enable connectivity with **low carbon modes of transport** and design to **incorporate readiness for zero emission vehicles**.

Buildings

4. Work with Government to **deliver retrofitting to improve energy efficiency** of the existing housing stock
5. Scale up industry capability to deliver **low carbon heat solutions** in buildings, supporting heat pump deployment, trials of hydrogen heating systems and heat networks
6. Enhancing the **energy performance of new and existing buildings** through higher operational energy efficiency standards and better building energy performance monitoring

Construction Activity

7. **Implementing carbon measurement**, to support our construction projects in making quantifiable decisions to remove carbon
8. Become world leaders in **designing out carbon**, developing the capability of our designers and construction professionals to develop designs in line with **circular economy** - reducing embedded and operational carbon, shifting commercial models to incentivise and reward measurable carbon reductions.
9. Support development of **innovative low carbon materials (prioritising concrete and steel)**, as well as advancing low carbon solutions for manufacturing production processes and distribution



Atkins Limited

Questions to the business leader:

❖ Why is making progress on Net Zero important to your business?

Global warming is threatening our way of life, from rising sea levels leading to population displacement, to extreme weather events resulting in significant damage to societies and leading to socio-economic instability. Today, we have an opportunity to reverse this trend. However, the transition toward a net zero carbon system is not happening nearly fast enough. As the urgency around climate change intensifies, decisions across Government must accelerate if the UK is to match ambition with action. The year 2050 may seem a long way off, but for major infrastructure projects the journey from initiation to commissioning can take ten years or more. Decisions across Government and actions taken by society, organisations and individuals must accelerate if the UK is to match ambition with action.

The climate emergency demands urgent action and leadership by architects, engineers and construction consultants. We understand that we must act now, ensuring that all projects deliver net zero whole life carbon. The enormous changes required will impact every aspect of our lives, from the way we travel, heat our buildings, and ensure food and health security for our communities, generate our power, operate industrial processes, and responsibly tap into our rich natural resources – every aspect of our lives will, in some way, be touched by this revolution. Meeting this ambitious target requires a sense of urgency that cannot be overstated. Decarbonising the UK economy will be an immense challenge that will require new ways of working and new ways of 'seeing' carbon to enable its effective removal from new build and existing buildings and infrastructure, transport and energy system networks. We believe that as an organisation we have a role to play in this transition and a responsibility to push the boundaries of innovation today, to build for tomorrow.

Atkins and Faithful+Gould, members of the SNC-Lavalin Group, are a leading engineering, design and project management organisation with capability and experience in delivering major capital projects and programmes that span the energy, transportation and infrastructure sectors. Our expertise in transportation and infrastructure, give us a unique perspective on the challenges of achieving Net Zero. As a firm supporter of the United Nations Sustainable Development Goals we are committed to actively supporting the transition to net zero economy. Our people have chosen to work in an industry that can make a difference. As a business we must provide the framework to allow all of our teams the chance to lead the way on net zero carbon. Engineering Net Zero is our blueprint for the future, ensuring SNC-Lavalin rise to the challenge that we as an industry must respond to.

❖ Which of the 9 priorities are more relevant to your business and clients and why?

As a global design engineering and project management consultancy a large part of our work is focused on the transportation, building and infrastructure design sectors, so it is anticipated that we will influence all of the 9 priorities.

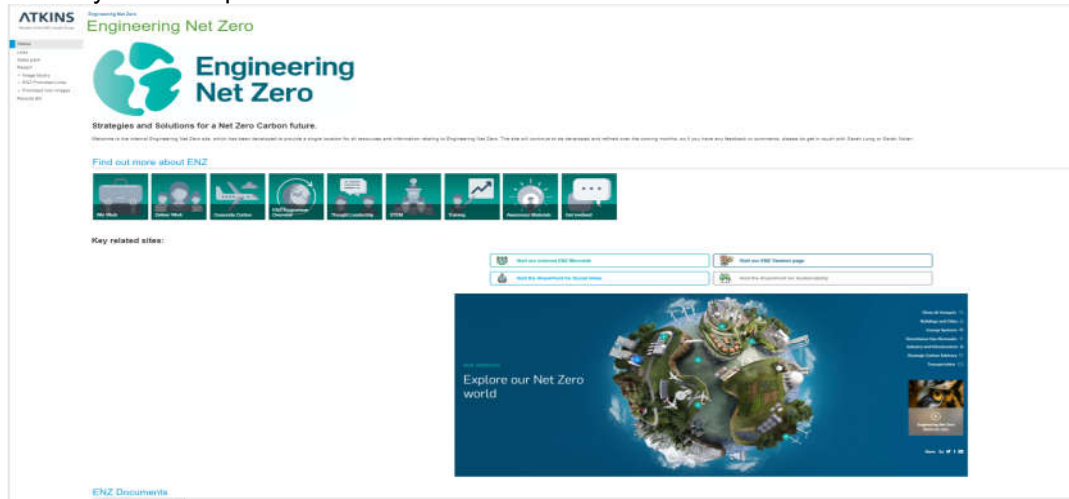
Atkins currently contributes to each of the 9 priorities and will continue to focus on these areas. We understand that the implementation of these priorities is critical to improving our progress as a future facing, ethically, environmentally and socially responsible business. As we continue along our strategic path, we are looking forward to improving our performance in relation to all of the priorities. The priorities we consider most relevant to our business, where we can make the most tangible difference are 3, 4, 6, and 7.

Most relevant priorities	Reason
3 Championing developments and infrastructure investments that both enable connectivity with low carbon modes of transport and design to incorporate readiness for zero emission vehicles .	<p>Transport is the UK's largest source of greenhouse gases. The demand for vehicles is increasing as the population is growing.</p> <p>We work across many major infrastructure projects where we have direct influence on enabling connectivity and ensuring our future mobility considers carbon.</p>
4 Work with Government to deliver retrofitting to improve energy efficiency of the existing housing stock	<p>More than 80% of UK dwellings are heated by fossil fuels.</p> <p>We have expertise and knowledge to support the strategy and delivery of delivering retrofitting of housing (and other buildings).</p>
6 Enhancing the energy performance of new and existing buildings through higher operational energy efficiency standards and better building energy performance monitoring	<p>Reducing energy demand and operational carbon emissions is well understood and achievable in the short-term.</p> <p>We work across many existing and new developments where we have control of the energy performance to reduce operational emissions.</p>
7 Implementing carbon measurement , to support our construction projects in making quantifiable decisions to remove carbon	<p>Making carbon visible is key to being able to effectively decrease carbon emissions. Data led decisions can be made possible through carbon measurement, which will drive continual improvement.</p> <p>We have experts, tools and databases to inform quantifiable carbon reduction interventions</p>

❖ What are you doing to make progress against the relevant priorities (of the 9) in the short and long-term? (Could include targets or milestones)

Our organisation's stated vision is to 'embed sustainability in everything we do, progressing attitudes within the industry and aspiring to make all schemes in which we are involved net zero by 2030' **At Atkins it's important to us to lead by example, and that's why we have set a commitment to achieve Net Zero by 2030** ahead of the target set in the context of the Paris Agreement. In addition, Atkins and Faithful+Gould, UK and Europe have made a commitment to be carbon neutral in 2021.

In 2021 we are looking ahead and locking in some of the good practice that the events of 2020 brought to the fore, to drive sustainable reductions in emissions for the long term. To meet both our carbon neutral target and our net zero commitment, we are drawing on our collective strength: both the innovations and experience of our leading experts, and the ideas of our staff in the earlier stages of their careers. We are also committed to sharing our successes, our insights and lessons learnt as we work towards Engineering Net Zero, through continued reporting and thought leadership. Our global [Engineering Net Zero Programme](#) is focused on working closely with clients to build a more sustainable future, striving to reduce carbon at every project stage. Our [Engineering Net Zero website](#) sets out a pathway to net zero for key sectors including: buildings and cities, energy systems, greenhouse gas removal, industry and infrastructure, strategic carbon advisory and transportation.



Our focus is on making carbon more visible throughout project lifecycles, measure it and then drive reductions from design through to decommissioning. Across all sectors a key element of our approach entails effective data capture, reporting and communication. A key challenge in delivering sustainable and net zero carbon outcomes is that all too often, carbon is not visible to users, stakeholders and design teams. To effectively reduce carbon, you first need to be able to see it, track it and proactively make informed decisions about how to remove it without compromising the wider integrity of a scheme's objectives or desired value outcomes. We are prioritising an approach that: (1) follows the carbon reduction hierarchy principles as set out by PAS2080; (2) promotes a process that ensures Net Zero data is fully integrated into design and asset management workflows and (3) educates our people: enabling and empowering them to make informed decisions about how and where they can influence carbon removal across the whole life cycle of an asset or system.

Transportation

What are we doing to make progress?

1. Accelerating the shift of the construction workforce to zero emission vehicles and onsite plant

We share in the ambition to shift to zero emissions construction vehicles and onsite plant. Our strategic priorities focus on accelerating the shift to low-carbon public transport, active travel and enabling the transition to electric vehicle use, whilst also looking at decarbonising long-distance transport, freight, aviation and shipping. Decarbonisation, climate risk and resilience are being integrated into all our transportation projects. From understanding the carbon baseline, setting targets and pathways, to stress-testing Net Zero projects, aligning with the Paris Agreement and securing funding at scale. We have regular CPD sessions on zero emission onsite plant.

Our company has included electric company vehicles to reduce carbon footprint. The company offers a CO2 incentive scheme which operates by providing additional money towards your entitlement when you choose a car with lower CO2 emissions.

Net Zero Transportation: [06-Net-Zero-Transportation.pdf \(engineeringnetzero.com\)](#)

2. Maximising use of Modern Methods of Construction and improved onsite logistics, reducing waste and transport to sites

Modern Methods of Construction is one of our top 5 perspectives that we are focusing on in 2021 as a company including upskilling our construction industry. We have appointed a National Head of Modern Methods of Construction, Stephen Wightman. Stephen has worked in industry and is able to share the key challenges and opportunities with our staff and clients to maximise the benefits of modular delivery.

We are currently engaged on over 4 million square feet of projects using a variety of forms of Modern Methods of Construction across multiple market places.

Our modular housing offering, EDAROTH (Everyone Deserves a Roof Over Their Head) was launched as a result to the housing crisis. This is designed in house and built using modern methods of construction.

3. Championing developments and infrastructure investments that both enable connectivity with low carbon modes of transport and design to incorporate readiness for zero emission vehicles.

We rely on our cross-sector expertise to create complete pathways to Net Zero and also build climate resilience for new and existing developments. Our range of services, allows us to support on nature-based solutions, land use and strategies for building greener value chains, to repurposing and recycling

existing assets, smart maintenance, green logistics and design and Modern Methods of Construction. We consider transport connectivity with all project development. We understand that not all clients and projects will have the funding or requirements for zero emissions vehicles so we always consider future adaptability and incorporate readiness for zero emission vehicles.

Key examples of projects where we are championing developments that enable low carbon connectivity:

- Tipner West, Portsmouth – A masterplan in Portsmouth where we are supporting the City of Portsmouth to be bold and ambitious around future mobility and low carbon modes of transportation.
- Leiston, Suffolk – A net zero carbon project to end fuel poverty and reach net zero emissions to deliver Suffolk's first net zero town.
- Meecebrook, Stafford – A new build net zero carbon garden city, focusing on future mobility and promoting cycling and public transport before private cars.

Buildings

4. Work with Government to deliver retrofitting to improve energy efficiency of the existing housing stock

The company is committed to supporting industry engagement with retrofitting. We have individuals involved with the LETI retrofit guide, CIBSE and RICS initiatives to help shape design solutions for retrofitting housing stock.

We are also working with key Government departments such as MoJ and GPA on retrofitting their non-residential buildings.

We are Salix Finance's (funded by BEIS) technical advisor on assessing energy efficiency and renewable energy projects.

We are committed to upskilling our people and clients, developing processes and tool to understand the investment, interventions and skills required to retrofit the UK housing stock.

5. Scale up industry capability to deliver low carbon heat solutions in buildings, supporting heat pump deployment, trials of hydrogen heating systems and heat networks

On our large projects we aim to support industry to scale up low carbon heat solutions in buildings by supporting heat pump deployment, trials of hydrogen heating systems and heat networks.

We have an extensive portfolio covering Carbon Capture and Storage (CCS) design and delivery, energy storage and system integration/resilience. We

also have considerable experience in the offshore wind, solar, hydro and nuclear sectors.

We maintain a 'technology agnostic' stance across the industry to ensure we advise clients on the best solutions for them.

6. Enhancing the energy performance of new and existing buildings through higher operational energy efficiency standards and better building energy performance monitoring

We encourage all of our clients to enhance energy performance.

We encourage the use of TM54 operational energy modelling as well as energy use intensity targets. Our BSRIA soft landings and government soft landings delivery includes post occupancy evaluation to increase building energy performance monitoring.

Construction Activity

7. Implementing carbon measurement, to support our construction projects in making quantifiable decisions to remove carbon

Low carbon solutions are at the heart of everything Atkins does across the plan, design, enable cycle. We have developed a suite of carbon tools that enable our designers and engineers to optimise the carbon credentials of a project. Mapping both the embodied and operational carbon of any project enables our clients to make value based and robust decisions about which options to adopt in order to minimise carbon over the design life of their structure or scheme. Atkins developed its 'Carbon Knowledgebase' in 2008. After reviewing 60 tools, the Atkins 'Carbon Knowledgebase' was selected to become the Rail Carbon Tool. Bought on industry's behalf by RSSB with co-funding from Network Rail, and launched in 2015, it now has over 300 users and is managed by a cross- industry working group including Network Rail, TfL, HS2 and Crossrail. This has been used to identify hotspots of embodied carbon and opportunities to reduce this.

We are working towards utilising PAS2080 on all of our projects.

8. Become world leaders in designing out carbon, developing the capability of our designers and construction professionals to develop designs in line with circular economy - reducing embedded and operational carbon, shifting commercial models to incentivise and reward measurable carbon reductions.

We are keen to understand how we could transition our commercial models to incentivise and reward carbon reductions through measured benefits realisation. We are currently exploring this with several private and public sector clients.

We use the principles of the circular economy to inform our design approaches and apply them to managing carbon emissions. We have internal upskilling training programmes as well as a growing

group of low carbon consultants who can support with this process.

9. Support development of innovative low carbon materials (prioritising concrete and steel), as well as advancing low carbon solutions for manufacturing production processes and distribution

Our company is supporting research into building materials and their embodied carbon content. We are working with clients to understand the key barriers such as security, robustness and cost response. We challenge our design teams to and looking review the lifecycle carbon impact of the materials selected. at Asking questions about the concrete makeup;, can we reduce the thickness of elements, can we change the mix, are there additives that can increase performance, improve drying in the factory to speed up delivery? To ensure that the opportunities to reduce carbon have been carefully considered..

❖ How have you helped your supply chain understand what is required against the 9 priorities?

Our aim is to quantify carbon emissions to make this more visible to the supply chain. Our internal experts are currently working with our supply chain platform, to understand and reduce carbon emissions. We work with industry and stakeholders to develop and implement new methods to track and reduce carbon emissions across the supply chain. Our teams use sustainable procurement plans to guide specification towards sustainable construction products.

We understand that for many companies, the majority of climate impact is located outside of our direct control, in the highly complex Scope 3 emissions. We are striving to engage with suppliers and create low-carbon and easily recyclable products and services to reduce value chains emissions. We are keen to encourage and incentivise all of our value chain to think more sustainability, rather than leaving them behind.

We are looking at assisting at assisting potential new supply chain entrants with their strategic proposition in UK market in terms of net zero carbon, social value and MMC. We introduce all suppliers to sustainability through our Supplier Code of Conduct ([supplier-code-conduct-en.pdf \(snclavalin.com\)](#)) which is connected to our sustainability policy statement ([sustainability-policy-statement-en.pdf \(snclavalin.com\)](#))

Our sustainability principles:

- A society for our future – inspiring the next generation; investing in communities; developing sustainability knowledge and skills, and creating a healthy, safe and secure workplace.
- An environment with a future – supporting a low carbon economy; demonstrating respect for the environment through resource efficiency and preventing pollution; and protecting and improving ecosystems.
- A responsible business of the future – influencing and supporting sustainable economic growth with strong governance, integrity and accountability; being part of a global business while recognising the responsibility and the importance of providing local services without compromising future generation's business needs

We have an extensive online learning library with modules on Net Zero and Environmental Awareness. Drawing on these resources allows us to provide bespoke training plan for all our staff and suppliers. These modules include a mandatory introduction on our vision for Net Zero for all staff and suppliers when commencing work on contracts. These can be accessed regularly through bespoke modules delivered via webinars and saved on our e-learning zone for access following the live events.

We work with our supply chain to support them with delivering this by offering the following:

- Provided on-demand training
- Share appropriate technology
- Leverage market opportunities
- Support local industrial clusters
- Maintain supply chain sustainability.

❖ **As a business leader what do you think the biggest challenge is and how are you working to overcome it?**

Behavioural Change and Skills Gap.

The UK has reduced emissions by 40% since 1990 while its economy has grown. This progress has come largely from things that have not involved consumers changing their behaviour - notably decarbonisation of electricity supply. Household consumption accounts for almost three quarters of greenhouse gas emissions (Imperial College London, 2019 - Behaviour change, public engagement and Net Zero). There is an urgent need to promote greater engagement and action from individuals to use less and reduce their own emissions.

The biggest challenge is driving behavioural change. Government and industry must create a context which nurtures public engagement with action on climate change and must enable all consumers to take specific actions that deliver large emissions reductions. The facilitation of behavioural and societal shifts must be partnered with building optimism.

As part of our initiative to drive behavioural change across our organisation, we are rolling out additional training across the company to raise awareness of carbon, how it is measured and how we can deliver carbon reduction across projects; this will provide all staff with the knowledge and tools to have informed conversations about carbon within our clients. We will also be launching an internal behavioural change initiative to encourage staff to make personal commitments to reduce carbon both in their home and work lives. This will include focus topics such as transport, heating and diet.

❖ **In your view what is the one innovation or change that is going to have the biggest impact on carbon or progress in our industry?**

Low Carbon Materials

Our industry requires a rapid decrease in the use of carbon intensive building materials. Building materials account for roughly 19% of the UK's total greenhouse gas emissions. (Building Futures (Undated), Material facts) The majority of this comes from items such as steel and cement.

There has been lots of great research into innovative materials including low carbon cement and concrete. However, the use of these low carbon materials is very limited on our construction sites. The innovations need to be commercialised and applied at scale. Clients, design teams and contractors are often reluctant about using new building materials, perceiving them as too risky and more costly. This leads to a lack of demand for the innovative materials. The project teams are also subject to financial, insurance and legal constraints that shape how innovative they can be which requires changes from these industries.

To overcome this quickly, the following short-term changes will be crucial:

- Building material procurement processes to include embodied carbon measurements
- Whole life cycle carbon assessment for all buildings
- Cross-sector collaboration
- Support from industry to implement and scale the innovative technology

This will be better enabled by **data collection** and improved information management. Our approach integrates organisational information requirements (OIR) with asset information requirements (AIR) and exchange information requirements (EIR), as outlined in the ISO framework. As an example, an

organisation's goal to become entirely carbon-neutral within the next decade would form its OIR, as this goal would be used to define the information needed from its assets. We are working to support ISO 19650's implementation by tailoring its protocols to each of our clients.

Green House Gas Emissions



Questions to the emerging leader:

Sarah Nolan – Senior Consultant

- ❖ **What do your peers and wider employees within your company think about the businesses' approach to Net Zero?**

We have set up an internal net zero carbon forum which is growing exponentially. Staff of all grades across the business are keen to get involved in the low carbon agenda across a range of fora including on Yammer, via our technical networks and through project delivery. It is a topic that inspires energy, discussion and engagement. As an example, earlier this year the graduate community in our Bristol office elected to organise a suite of lunchtime presentations on the topic of sustainability and net zero as part of a fund-raising challenge.

We recently undertook a survey on carbon and net zero across the Infrastructure part of the business (approx. 2500 employees). Over 85% of staff who responded agreed that the business leadership team were very committed to sustainability and carbon reduction. The company has recently announced a commitment to achieve net zero by 2030 and this announcement has been received positively by staff and by our shareholders, with a 14% increase in share price.

- ❖ **How are the younger generation within your business engaged in this.**

We have a Sustainability Technical Network that spans our Atkins and F+G organisations. The Yammer page allied to this provides a forum for everyone across the organisation to engage in information sharing and discussion around topics ranging from sustainable living to technical discussions around carbon offsetting options. In addition, our graduate community have been proactive in stepping forward to support our Engineering Net Zero programme and have been involved in running lunchtime webinars, looking at carbon emissions from their part of the business and driving behavioural change. Given the enthusiasm and engagement from graduates across the business we are in the process of developing a Young Professionals Development Forum within the Network to harness the enthusiasm and energy of the community and to support the technical development of those interested in carbon and sustainability.

- ❖ **What more do you think your business could be doing against the 9 priorities?**

Whilst we are currently delivering across all 9 of the priorities, progress can be slow and is largely driven by the ambition of our clients or public bodies across the sector. My organisation, and others like it, can always

do more to accelerate progress through being a champion of this agenda in all the work we do. This means upskilling and empowering our people to think differently about how we design and deliver work and being able to challenge our clients to also think differently. The Net Zero agenda should be seen as an opportunity for innovation and to challenge the status quo. In support of this, we could therefore be doing more around priority 7 specifically; implementing carbon measurement across all projects would help to make carbon visible and enable better decisions to be made about carbon right from project initiation to maximise potential carbon savings.

Our work across the built environment offers real opportunity to drive a significant reduction to carbon emissions. We are working with multiple Government departments where we have the opportunity to drive this agenda. We are able to work as an agnostic advisor to upskill our Clients and collaborate with suppliers. We are currently planning to produce our own in house database of suppliers which we anticipate will be live by the end of the year to provide a source of info on MMC including sustainability performance information. We are also looking at producing a MMC cost guide and pre-manufactured value calculator tools. We are currently planning and investing in a global buildings and cities proposition which will include buildings, transportation, and construction activity.

❖ A Youth Voice COP climate is being organised in Milan to bring together young people globally- what would be your key issue to raise?

An issue of real importance to the Net Zero agenda is **biodiversity**. Here in the UK and globally, biodiversity is critical to reaching net zero; in the UK specifically, woodlands, peatlands and coastal marine ecosystems have capacity to sequester large amounts of carbon. The climate emergency and a biodiversity crisis are inextricably linked and should be tackled through collaborative efforts.

Over the past year we've seen nature play a critical role in supporting mental health globally, with nearly half of UK adults turning to green spaces as a coping mechanism through the pandemic. Much more needs to be done to improve biodiversity, through conservation and restoration. Through protecting and improving our natural capital, we can help combat the climate crisis, improve biodiversity, and reap the socioeconomic benefits through encouraging people to 'reconnect' with nature.

❖ What do you do in your daily life/job that makes a difference?

One of the ways in which I try to make a difference is through **raising awareness** on key issues to help encourage a shift towards a more sustainable organisational culture. I have been working closely with our graduate community, raising awareness on topics such as carbon footprints, the carbon impact of digital technology, and other key topics. By making carbon more visible and promoting small changes in behaviour to a demographic that cares deeply about this topic, we can give people a sense of ownership over this agenda and hopefully drive wider behavioural change. We can also encourage people to take this learning and apply it to their day to day delivery, encouraging grass roots innovation.

