Rising stars and rising tides

Future leaders respond to London's climate emergency

July 2021

Regional Growth

Contents

Foreword 3

Introduction 4

Chapters

1. Energy consumption 5

2. Data collection, target setting, implementing ESG strategies 11

3. Green skills 16

4. Supply chain 19

5. Waste management 23

Foreword

Our third London Climate Action Week (LCAW) comes at a critical time for the capital. As London emerges from the grips of the pandemic and the UK transitions from Brexit, we have a real opportunity to use the learnings from these challenges and make London the heart of the UK's green recovery. The reality is, if London doesn't reach Net Zero, the UK doesn't either.

In a year where the UK hosts both the COP26 Summit and the G7 – setting the UK front and centre on the global stage – now is the time to seize the moment and highlight the exceptional work London businesses are doing to reach Net Zero. And to share best practice and learnings between business, on how we can collectively get there. Now is the time for partnership.

Moments such as LCAW, provide a real opportunity for progressive leadership and partnership. Both B2B, and betweeen business, government and civil society. Continued leadership from City Hall will also help steer more businesses onto the green road and demonstrate to the world how a global mega city can decarbonise.

Getting this right is paramount. Not just to combat the climate crisis, but to ensure that London continues to attract the brightest and best talent from around the globe. Reaffirming that to live, work and study in the capital, is to be in a city that prides itself on progress.

This is why the CBI's London Under 35 Committee, comprised of the brightest and best future leaders the capital has to offer, has come together to create a resource to help other firms along this journey. Highlighting the great work that is already taking place to reach Net Zero, and to provide inspiration to other businesses. Toegther, we can showcase what's already working and see where we can go further.

It's clear that this is the number one priority for the next generation of leaders - who are fixed on beating the climate crisis and turning it into competitive advantage.

We hope that you find this resource useful. Open-source sharing of best practice and cross-sectoral partnerships are central to realising our Net Zero ambitions. This is just the start, and we look forward to continuing this conversation with you.

John Stevens,

Associate Director, London and CBI lead for the London Under 35 Committee

Introduction

There are many threats to London's position as one of the world's leading cities. Whether that's domestically, and the need to ensure London is part of levelling up. Or globally, with increasing competition for our talent, investment and industries. But none of these threats are as pressing as the climate emergency.

It is vital that we use events like LCAW and COP26, as an opportunity to reaffirm how London can be a positive global leader and support not only the UK's Net Zero transition, but the world's.

The capital remains at the forefront of innovation, growth and talent. Now is the time to double-down on these assets and push forward with an inclusive, green recovery.

This guide focuses on five main themes to support firms looking to start or continue their decarbonisation and sustainability journey, regardless of size, sector or stage in the process:

- Energy consumption
- Data collection, target setting, and implementing ESG strategies
- Green skills
- Supply chain
- Waste management

"We hope that this fantastic resource offers practical guidance and new ideas on the role that business can play to promote a greener recovery as we emerge from COVID-19.

"London is always at its best when it leads from the front. And with the eyes of the world on us as we host COP26 and the G7, let us all play our part to deliver on our shared goal of a more sustainable future for London, and the whole of the UK. We are encouraged by the excellent start that London has made towards Net Zero but let's keep going!"

Rodney Appiah, Chairman of Cornerstone Partners and

Chair of CBI London Under 35 Committee

Energy consumption

The energy consumption of London and UK businesses, whether from heating our buildings, keeping our lights on or in the manufacture and delivery of our goods and services, is one of the main sources of our greenhouse gas emission.

In February 2021, Rt Hon Alok Sharma MP, COP26 President, called for "a joint endeavour between nations, civil society and business" in the fight against climate change. A central aspect of this is a commitment for UK business to achieve 100% renewable energy by 2050. But we can and should go further by making proactive and positive steps to work towards carbon-neutrality sooner, where possible. Such as rethinking business operations or switching fleet vehicles to run on more sustainable forms of energy with lower emissions.

The road to a greener, brighter future will see the development of thousands of sustainable and resilient jobs relating to our use of greener energy. There will be exciting innovations in how energy is utilised, the reduction of its emissions and how its generated. And with these developments, will come cost-saving opportunities for business.

Businesses across the UK are already leading this transition, with brilliant, cutting-edge examples across all sectors of how they are driving this change. The road to carbon neutrality will take decisive action by business. But can be achieved through proactive collaboration, to the benefit of local communities, as well as profitability.

Summary: reducing and decarbonising energy consumption

The following case studies highlight how businesses have tackled their energy consumption through a variety of methods, such as:

- redesigning heat systems
- setting specific targets on energy usage
- partnering with government to access funding to make systemic change
- working with suppliers, logistics firms and customers on how products are delivered
- upgrading facilities to improve their usage
- retrofitting facilities to utilise greener fuel

Goldsmiths, University of London: reducing gas consumption across campus and improve local air quality

In August 2019, Goldsmiths declared a climate emergency. Since then, the university has developed a plan to help achieve its ambitious goal of becoming carbon neutral by 2025. This became the PLAN25, which acts as a road map for the carbon neutrality strand of Goldsmiths' Green New Deal commitments.

The university has now made a phenomenal step towards achieving its goal, by successfully securing a £5m grant from the Public Sector Decarbonisation Scheme. This will help significantly cut the College's emissions and bring them closer to their target.

Goldsmiths identified that gas consumption was a particular challenge in meeting their 2050 target.

A central aspect of PLAN25 is reducing the gas consumption of the Goldsmiths Estate through a redesign of the College's heating system, which at present relies predominantly on ageing gas boilers.

Updating the heating system to a low-carbon option will help the College to significantly cut its emissions.

The university sourced available public funding to help them implement a new low-carbon heating system, designed with the help of a third-party company.

Given the extensive costs involved in implementing a new heat network, the College looked for external funding sources to support the project, identifying the Public Sector Decarbonisation Scheme as a suitable funder.

In November 2020, Goldsmiths was awarded a £63,300 grant under the Public Sector Low Carbon Skills Fund to work with energy solutions provider SSE Enterprise and develop a detailed design for a new heat network.

In early 2021, it was announced that the university had been given the go-ahead to implement the plans, having secured a £5m grant under phase 2 of the government's decarbonisation scheme. This represents a huge endorsement of the plans Goldsmiths developed with SSE, receiving the maximum individual grant available from the £75m pot.

The plan looks to replace gas boilers with an electrically powered heat pump, which can still be connected to a district heating scheme.

This work will consolidate all of the university's significant energy-consuming campus buildings onto one single low carbon heat network.

As part of this, the university will install a new network of insulated underground pipes and will replace gas boilers in the main boiler house with an electrically powered heat pump. The new heat network has been designed so that it can be connected to a district heating scheme when this becomes available. The College has had initial discussions with Lewisham Council on this.

The new heat network will have a positive impact on Goldsmiths' emissions, while also improving the air quality of the borough they are located in. Plus saving the university money.

The new heat network will allow Goldsmiths to reduce the gas consumption of the Estate by over 75%, saving over 1,100 tonnes of CO_2e per annum. By reducing their carbon emissions, the College will have a positive impact on air quality in its local borough of Lewisham, an area with high levels of air pollution. In total the three key PLAN25 projects – the new heating network, the LED lighting upgrade, and the Building Management Systems upgrade – are forecast to save the College around £260,000 each year.

McAfee: globally transitioning to 100% renewable energy

Due to the international operations of McAfee, the company has been utilising hybrid home and office working practices to reduce energy consumption.

McAfee is a global organisation serving digital innovation to protect global organisations from cybercrime. As a business, McAfee has been focusing on sustainable working practices for a number of years. Due to the international operations of the business, McAfee has offered working from home contracts for several years to encourage cross geography collaboration, and reduce the environmental impact posed by a large global workforce.

McAfee identified key areas of decarbonisation and sustainability to focus its attention on.

The acceleration of sustainability and 100% renewable energy as a consequence of climate change, has led to a number of shifts across the organisation. Although their EAS aligned governance practices began in 2019, McAfee has focussed in on key areas, such as energy consumption, sustainable practices, and their usage of renewable energy at all corporate locations in the past year.

The organisation identified its global offices as a key source of its energy consumption. To address this, McAfee established a company wide initative to implement 100% renewable energy across all of its offices.

A global multiyear initiative to change their energy provider to 100% certified renewable energy across all office locations has been a leading policy for McAfee. With a global stakeholder meeting scheduled mid-2021 to enhance visibility of the initiative at a board level to accelerate the transition.

Currently, five of McAfee's sites have moved over to using 100% renewable energy.

Case study - Sainsbury's: Assessing the impact of the COVID-19 pandemic on Net Zero targets.

Carbon Climate change and resource scarcity are complex global challenges, which affect every part of Sainsbury's business. To grow the business sustainably, Sainsbury's is cutting carbon and maximising energy efficiency.

Sainsbury's assess the COVID-19 pandemic to understand its impact on business operations (including energy use) and customer behaviour and how this could impact its Net Zero ambitions.

The impact of the COVID-19 pandemic on Sainsbury's emissions has been substantial. Sainsbury's has seen a reduction of energy usage due to the closure of certain areas of stores, such as cafes and counters and across all of its office space.

But they have also seen more fuel usage due to the rise of online shopping and an increase in the number of products going through its supply chain.

Overall, Sainsbury's has reduced its absolute GHG emissions within its operations to 818,161 tCO2e, a reduction of 3% year-on-year and 14% from its 2018/19 baseline. This is keeping Sainsbury's on course for its headline target.

Sainsbury's: Utilising the power of electricity to decarbonise energy consumption

Sainsbury's has established several programmes across its business operations to address energy consumption. This includes looking at energy use within its stores and its fleet.

Sainsbury's established an LED lighting programme to reduce energy use in stores.

Sainsbury's has rolled out an LED lighting programme to help reduce its energy consumption. 79% of supermarkets are already fully upgraded and Sainsbury's remain on track to install the programme in 100% of its supermarkets by the end of 2021.

The retailer established a trial to use electric fridge trailers on its vehicles.

Following a successful trial, Sainsbury's is looking forward to rolling out five electric fridge trailers on its vehicles this year. These will run on 100% electric power, with battery charging at depot and an axle generating electricity to top up the battery when on the road.

Bakkavor Group: upgrading refrigeration systems to help decarbonise energy consuption

The manufacturing of fresh prepared food requires precise management of heating and cooling systems, which can be energy intensive. To counter this, Bakkavor Group have moved away from using F-gas in their refrigeration systems

In 2019, Bakkavor Group started a multiyear programme to upgrade the refrigeration systems in their UK factories away from using fluorinated F-gases to more sustainable solutions that have a zero Global Warming Potential (GWP).

On top of reducuing their use of F-gases, Bakkavor Group has also introduced heat recovery technologies across factory operations.

The first phase of these upgrades has fully replaced the systems in five UK factories at a cost of almost £20m, delivering a significant reduction in environmental impact. Several of these also include heat recovery technology, that use residual heat from the new systems to heat water for use in other parts of the factory. Since 2017, they have reduced UK carbon emissions from F-gas sources by more than a third (36%).

To demonstrate their commitment to sustainably energy sources, Bakkavor Group has now linked perfermonce to CSR targets, which includes GHG emissions.

In March 2020, Bakkavor Group completed a £455m refinancing of their bank facilities agreement. This includes a margin adjustment linked to performance against two of the Group's Corporate Responsibility targets: GHG emissions targets and food waste reduction.

BAE Systems: working with clients and communities to reduce energy emission, by implementing sustainable programmes and retrofitting.

BAE Systems recognised a shift in the customer needs of its Portsmouth Naval Base (PNB) and the wider societal change in attitudes towards the importance of Net Zero Carbon (NZC) and decarbonisation. The change in customer focus and local community attitudes, saw BAE Systems make sustainable energy a focus of their policies and product development.

BAE Systems assessed the local energy and emissions impact of new products coming into the Portsmouth Naval Base.

With the arrival of the Queen Elizabeth carriers at PNB, the biggest ships ever built for the Royal Navy (RN), energy consumption was set to more than double the site's peak electrical demand. There were concerns that the amount of power the carriers take, would cause a significant strain on the capacity within Portsmouth city itself, as well as the dockyards.

The geographical location of PNB is unique. It sits on Portsea Island and in the city of Portsmouth. There was only one main incoming electrical supply from the mainland UK at the time of planning. The Royal Navy wanted to avoid using on-board or shore-side diesel generators, which bring with it associated diesel emissions.

Once the potential emissions impact was recognised, BAE Systems helped develop a new sustainable energy programme for its client.

An energy programme was developed with a focus on a new and innovative approach to provide sustainable energy to PNB. Supporting the RN's ambitions, BAE Systems' energy team worked closely with industry partners at PNB to deliver a major programme of works to upgrade critical infrastructure and ensure high voltage shore power for the arrival of HMS Queen Elizabeth (in 2017) and HMS Prince of Wales (in 2019) into their home port.

This critical programme of works required a new power generation plant to be fully commissioned and operational before the arrival of HMS Prince of Wales.

Key activities included:

- conduct feasibility studies and prepare the business case for a viable Combined Heat and Power (CHP) solution
- installation of CHP plant to provide minimum 9MW of secure power
- recover waste heat from the engine flues to reduce steam load (and carbon emissions) across the site
- deliver systems integration to enable power transfer between critical site operations
- deliver economic through-life operation to generate savings in excess of £2.9m per year

BAE Systems utilised retrofitting technology to change energy source from diesel to natural gas.

BAE Systems retrofitted the 'Electric Light and Power Station', originally built in 1906, from diesel to natural gas, and installed a 13.5MW CHP plant, with 3MW of largescale batteries. These were successfully integrated into a 60-year-old electrical and steam network.

The new power plant produces electricity from mains gas and captures the heat by-product for use in a site-wide heat network, reducing the Naval Base's carbon footprint. The CHP can produce >100,000 MWhrs/yr of power, enough to power between 18,000 and 25,000 homes.

Switching to self-generation and reducing overall demand has meant the strain on the local grid has been avoided, and the combined efforts of other site wide savings measures and the CHP have amounted to annual cost savings of £10 million, with £4m coming directly from CHP facility. Over the past 15 years, BAE Systems has helped reduce energy related carbon emissions by 65%.

Data collection, target setting and implementing ESG strategies

Success today is much more than delivering on time and on budget: it is about responding to clients' demands and embedding considerations of social equity, economic justice, environmental sustainability, and resilience into the work business does. This is crucial to achieve the best outcomes for communities and planet.

Ambitious target setting, and delivery of these targets, is now a key consideration for top talent and finance. Both consider this in making decision on whether to partner or work with a company.

Targets, data collection, and ESG statergies must be at the forefront of business decision making. What gets measured, gets done. When using benchmarking, data collection and target setting, business is better able to support the transition to a net-zero economy.

Summary: collecting data and setting targets

The following case studies discuss:

- the process of setting net-zero targets
- practical considerations for benchmarking
- data collection to help improve business practices
- embedding targets into ESG and Climate commitments
- putting Net Zero at the heart of a company's ethos

AECOM: implementing an ESG strategy

Environmental, Social, and Governance (ESG) considerations are particularly important in the infrastructure industry because of the long-term nature of infrastructure investments. To reflect this, AECOM has implemented ESG standards across their business operations.

AECOM has recognised that success today is much more than delivering on time and on budget. It is about responding to client demand and embedding considerations of social equity, economic justice, environmental sustainability, and resilience into the work completed for clients. As part of their Sustainable Legacies strategy, AECOM is setting bold aspirations in terms of net-zero carbon emissions and advancing other initiatives aligned with their ESG agenda. Such as expanding the diversity of their workforce and leadership. They are also channeling the expertise of their 47,000 design and engineering professionals into growing and developing their dedicated ESG services.

AECOM recognises that Net Zero targets go beyond enrivromental impacts, and can have wider societal benefits such as improve health outcomes for global communities.

More than 1,500 of AECOM's clients and 800 cities globally have already set net zero targets, and others are looking at strengthening the resiliency of communities to adapt to climate change, or rethinking master planning in order to advance community equity and economic prosperity. Another focus is on advancing projects, initiatives, and policies that uplift people and communities. This might be improved health outcomes for a community as a result of clean water infrastructure or reduced air pollution due to transport electrification.

AECOM's entire workforce is united behind its ESG principles, which makes them easier to deliver.

AECOM's professionals are driven to deliver sustainable legacies because the engineers, scientists, architects, consultants, program and construction managers are all committed to ESG principles. AECOM has found that demonstrating the positive impacts of AECOM's work with colleagues energises them.

Alongside an ESG focus to business practices AECOM has also set its own science based targets.

AECOM is also the first company in the engineering sector to have set emission reduction targets approved by the Science Based Targets initiative (SBTi), designed to meet the goals of the Paris Agreement on climate change. Through this and other enterprise initiatives, AECOM is committed to becoming Net Zero in their Scope 1, 2 and 3 emissions by 2030.

Establishing key themes and guiding principles has been critical to AECOM's ESG jouney.

Social equity, economic justice, resilience – these are themes that cut across everything AECOM's clients will be dealing with – and they want to play a critical role in addressing them. They are prepared to mobilise their network of experts and innovators to find solutions to these challenges, and to help their clients make informed decisions based on critical analyses to deliver truly impactful sustainable legacies.

Sainsbury's: Identifying Scope 1, 2 and 3 emissions and setting Science Based Targets to reach Net Zero

Sainsbury's began by identifying their Scope 1 and 2 emissions and set a Net Zero target for its operations.

Last year Sainsbury's announced a commitment to invest £1bn over 20 years to become Net Zero across its operations by no later than 2040. This target includes Scopes 1 and 2 emissions, covering direct and indirect emissions within operations.

Once established, the company incorporated a Scope 3 target, which looks at indirect emissions from Sainsbury's operations.

In 2021, Sainsbury's took their plan further with the addition of a Scope 3 target, which covers indirect emissions that occur throughout Sainsbury's value chain. This is because the organisation wants to reduce the environmental impact of the business and work with farmers, growers, and suppliers throughout the supply chain to support them to reduce their emissions.

The Science Based Targets initiative (SBTi) has approved Sainsbury's targets for Scopes 1, 2 and 3. For Scopes 1 and 2, these include the reduction of greenhouse gas (GHG) emissions from Sainsbury's own operations to Net Zero by 2040 in a bid to limit global warming to 1.5°C.

Sainsbury's has also adopted an environmental transparency approach to its Net Zero ambitions and actions.

Sainsbury's is also proud to be recognised by CDP, an environmental impact disclosure system, for its environmental transparency.

What is the CDP?

CDP is a not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts.

CDP sets a gold standard of environmental reporting, providing comprehensive dataset on corporate and city action.

Each year, CDP takes the information supplied in its annual reporting process and scores companies and cities based on their journey through disclosure and towards environmental leadership. They measure corporate and city progress and incentivise action on climate change, forests and water security.

Babcock International: setting targets and signing pledges to reach Net Zero by 2040

To help Babcock transition to become a Net Zero organisation, they supplemented their 2040 target by signing up to a UN business pledge.

This year Babcock announced 'Plan Zero 40', a plan to transition to become a Net Zero emissions organisation by 2040. In addition, they signed up to the UN Business Ambition for 1.5ºC Pledge. This commits Babcock to 1.5ºC science-based emission reduction targets, to be achieved by 2030, and sets a course for decarbonising their estate, assets and operations by 2040.

Alongside Babcock's own internal Net Zero ambitions, Babcock is supporting its clients to reach their own industry targets, or those of local and central government.

Babcock is supporting the Emergency Services sector (including in London) through their journey to an Ultra-Low Emission Vehicle (ULEV) fleet. Babcock's experience of working in the emergency services fleet management market has shown that focussing on the asset in isolation will not automatically enable operational effectiveness. Therefore a data driven ecosystem view is required to provide the public with a safe and effective service.

As the green agenda continues to gain momentum, the challenge and scale of change facing the Emergency Services is now becoming clearer. With the central government's commitment for the UK economy to reach Net Zero by 2050 and a ban on sales of wholly petrol and diesel powered cars by 2030, (with heavy vehicles now being considered by the government and likely to follow a similar timeline) key milestones have now been set for all fleet operators. In addition, the Mayor of London has set an ambitious target for London to reach Net Zero carbon emission by 2030.

Through Babcock's extensive experience of working with Emergency Serivces clients, they have recognised the need to bring an holistic approach to fleet decarbonisation

Babcock and partners are looking to deliver a support service that spans specification, planning, procurement, implementation and operations. Babcock's breadth of experience across the Emergency Services, Training and Power sectors means that they are able to bring holistic knowledge, expertise and private sector partnerships to deliver the future fleet ecosystem.

Babcock is currently engaging with the sector to share its current view of the challenges associated with achieving a ULEV fleet and support solution to help develop thinking. Helping customers understand this challenge and bringing them constructive ideas and services that can help them to embark on this journey, is crucial in supporting the sector achieve their sustainable targets.

EXL: Maintaining a GHG emission inventory.

EXL is working to continuously improve environment management. They are focused on carbon footprint reduction through measures in energy conservation, waste minimisation, and green infrastructure. These measures will aid EXL further in sustainable business development. EXL's efforts in environmental stewardship have a dual focus – that of reducing consumption of natural resources wherever feasible and of improving the efficiency of resource use.

To focus EXL's ambitions to reduce their carbon footprint, they identified key areas of unsustainability or emissions across their business operations and set annual targets to reduce these. These are:

- reducing energy consumption per employee by 2% each year
- reducing water consumption by 2% each year
- reducing paper consumption by 2% each year
- avoiding use of one-time plastic commodities

From 2017 onwards, EXL have maintained a Greenhouse Gas (GHG) emission inventory, which follows a rolling baseline. They also established an ESG committee.

GHG Emission reporting has become part of EXL's wider business businesses strategy, following the formation of an ESG Committee. While EXL already has environmental considerations as part of its supplier standards of conduct, in the future it is their intention to create goals around incorporating environmental criteria in the procurement processes and also taking on environmental mandates as part of each business function.

EXL launched a global project tracking GHG emission and decarbonisation.

As a Professional Services company, EXL's environmental impact footprint is not large. Regardless they initiated a global project on accounting GHG emissions and a decarbonisation project to reduce the footprint of existing emissions. Another impetus was to increase awareness about future climate change-related risks for businesses.

Reports on their business environmental impacts were commissioned, which allowed EXL to prioritise areas to tackle. This included:

GHG Inventory Accounting

- Identification of operational boundary and emission sources - baseline established for 2017-2019
- Increase in the scope and operational boundaries for 2020 reporting including emissions due to employees working from home

Performance Tracking Mechanism

- Peer benchmarking
- Climate related risk and opportunities identification and management protocol
- Development of emission reduction goals and strategy
- Formation of GHG/Climate Change Policy

Corporate Climate Change Strategy

- Implementing a decarbonisation strategy
- Establishing links between EXL's existing environmental stewardship and their carbon neutrality/Net Zero ambition

Projects and Initiatives

- Enterprise-level retrofit program
- Energy conservation using new-age sensor based technologies
- Usage of energy efficient equipment

Green skills

Green skills and training enhance sustainable development and improves humans' capacity to address environmental, social and economic issues. Having the right 'Green Skills' developed will help keep London ahead of environmental challenges and opportunities in a fast-changing global and political landscape.

The green economy is defined as one in which value and growth are maximised across the whole economy, while natural assets are managed sustainably. However, the transition to a green economy requires a workforce with the right skills. This includes not only skills in the low carbon and environmental goods and services sector, but also those needed to help all businesses use natural resources efficiently and sustainably and to be resilient to climate change. It is estimated in London that its 'Green Economy' is worth £40b and will employer nearly 250,000 people. It is therefore essential that businesses across London maximise this opportunity.

Summary: developing green skills and training

The following case studies show the contribution of how a diverse set of Lodnon businesses and educators are ensuring the capital meets its net-zero targets, and remains a world leader in skills, through Green Skills development and training. These look at:

- identifying skills gaps
- providing new training programs
- encouraging strong leadership
- in-depth study to develop these skills for the wider economy.

London South East Colleges (LSEC): developing employer-led green skills programmes

The construction industry is facing significant skills challenges, with 47% of the workforce likely to retire within 15 years, a loss of a quarter of its EU workforce during 2020, and a lack of new recruits. It is estimated that 230,000 new skilled workers are needed to meet current demand. In addition to general skills shortages, a February 2021 report from the IPPR concluded that the industry does not have the skilled workforce the UK needs to meet its Net Zero targets and that a more strategic is required for it to do so. The Mayor of London's retrofitting plan alone will require over 150,000 new qualified workers, which current construction industry does not have.

As construction is facing a green skills challenge, LSEC is implementing new programmes to meet that need.

As a historic provider of construction skills within South East London, LSEC has always responded to the needs of employers, using labour market intelligence and directly working with employers to provide a responsive curriculum. As the needs of the local economy shift, LSEC is using its expertise to reduce the jobs crisis in green skills by developing new employer-led green skills programmes for the construction industry, which will enable London to meet its net zero targets.

LSEC ran its first specialised green construction skills bootcamp in June 2021. They also have plans to deliver higher-level provision in the future to reduce skills gaps across multiple skill-levels to ensure that London has the construction workforce it needs to deliver its Net Zero targets.

The bootcamp style courses offered by LSEC provide the flexibility in provision that employers need to meet their skills demands

Building on the success of the Mayors Construction Academy (MCA) programme, which has provided employer-led construction training for over 2000 learners since 2019, LSEC has developed additional bootcamp courses in green construction skills, co-designed and co-delivered by employers to provide the construction industry with the skilled workforce it needs to deliver London's ambitious net zero targets.

The 6-week bootcamp model of the MCA Hub allows for employers to quickly change and adopt provision, based on their current needs. This responsive provision will ensure that any new challenges facing employers can be quickly addressed, ensuring a steady stream of skilled workers to ensure London can effectively implement policies to reduce its carbon footprint.

LSEC recognises their focus on green skills provision is important, but that it should form part of thier wider climate change agenda.

For LSEC, this is not just a matter of responding to skills needs. Since the introduction of their new Group Strategy in 2019, LSEC has been committed to maximising its impact on lives and communities. As one of the largest issues facing London, reducing the impact of climate change was a natural goal for the College.

Ryder Architecture: enhancing green skills through internal training

Ryder Achiceture has an intneral vision which underpins its practices. *Everything Architecture*, declares “Our goal is simple – to improve the quality of the world around us and, in doing so, improve people’s lives ... It defines a responsibility to an inclusive society and to the future of our planet”. This ethos has also been used to underpin the firms internal green skills development programme.

Ryder Architecture found that involving multiple colleauges from across the business helped encourage the development, delivery and buy-in of their new green skills strategy.

In 2018, a group of emerging leaders proposed to deliver a step change in Ryder Architecture’s sustainability goals to reduce the impact of practice and projects. This led to the development of a strategy to deliver meaningful change.

At the heart of Ryder Architeture’s strategy was the need to build the skills and capability within the practice and to identify key partners that can support this. To maximise awareness and engagement, a number of internal groups were initiated – made up of people from across the practice, at different stages of their career, to help deliver this programme.

They used a range of initiatives to enhance the green skills across the business to develop its service and empower colleagues. These included:

- Practice wide training and awareness delivered in house on project relevant topics
- Training to empower the leadership team to confidently advocate and support colleagues in delivering the step change
- Targeted specialist training to address key skills gaps
- Strategic appointments, bringing in experienced professions who would enhance teams and challenge practices
- Collaborating with partners within thier international Ryder Alliance, sharing learning and resources
- Developing a network of trusted advisors from across the industry that they could call upon to support internal teams

Birkbeck, University of London: supporting the development of new green skills to meet London and the UK’s skills gap

As part of their ambition to support substinability initiatives in the workforce, Birkbeck has introduced a suite of new executive courses to meet demand.

Birkbeck offers a range of programmes in the sustainability research and education space, which form part of their wider Green Skills agenda. These programmes, which include BSc and Msc in Environment and Sustainability, Msc Corporate Responsibility, and Msc Global Environmental Politics, are offered in order to support existing executives to upskill in this area. These courses are deliberately flexible, to enable executives to complete them while remaining in post. The courses are also available for undergraduate students looking to enter environment and sustainability related professions.

In addition to creating green skills based courses, Birkbeck has established an environment, landscape, and climate change research cluster

Birkbeck also carries out a varied programme of research into sustainability and climate change, through their environment, landscape, and climate change research cluster within their Department of Geography. This research is at the forefront of how environments change over time and how humans interact with these changes, and has implication with many stakeholders across business, from civil engineers to conservationists.

Supply chain

The route to Net Zero will involve engagement with the whole life cycle of goods production and service delivery. Business relies heavily on its relationship with these, and the performance of their supply chain.

From cutting waste in supermarkets produce, to switching to green energy to power a critical fleet of vehicles, business is leading the way in new ideas and is consciously encouraging its supply chain to enable and take this journey with them.

The following case studies exhibit a wide variety of innovative green thinking that has required direct engagement with supply chains from across industries as diverse as IT, food production and security. Each business has given careful consideration as to how to achieve their ambitious net zero targets and has identified the dependencies they have upon their supply chains.

The green credentials of suppliers now play a deciding factor in the tender process and any due diligence exercise when considering a new partnership. By sharing targets and integrating green practices into their supply chains, businesses are positively affecting sustainability and minimising the environmental impact across industry. All the while promoting business integrity.

Summary: collaborating with your supply chain to reach Net Zero

The following case studies show how organisations are working with their supply chains to reach Net Zero by working together to find solutions to existing problems.

Ideas include:

- trialing innovation in manufacturing
- research partnerships
- Setting Scope 3 SBTi targets

Diageo: collaborating with the supply chain to create the most sustainable Scotch whisky bottles

Diageo is committed to creating a sustainable future for their business and that includes looking for innovative new ways to make bottles and packaging that reduces the carbon footprint of their products. The packaging that helps protect and market their brands has environmental impacts throughout a chain that stretches from suppliers, through the retailer, to the consumer and beyond.

Diageo realised that their packaging needed to meet customer expectations of quality and match their goals for a sustainable future.

As part of a 2030 commitment to transforming packaging sustainability, Diageo collaborated on an innovatie trial to make the most sustainable glass Scotch whisky bottles ever. While Diageo's customers expect the brands they enjoy to be in a perfect condition, the wider organisation also wanted to use packaging which has the lowest environmental impact while protecting, delivering and presenting the quality of thier brands – this includes developing options to reuse packaging.

Diageo identified new partners for a collaborative pilot to reach their ambition to use sustainable packaging.

Diageo recognised that this ambition could not be met by Diageo alone, and they needed to engage directly with their supply chain. Through a collaboration between glass manufacturer Encirc, and leading industry research and technology body Glass Futures, a successful pilot project pioneered the lowest carbon footprint glass bottles ever produced for a Scotch whisky brand. The pilot project used waste-based biofuel-powered furnaces to reduce the carbon footprint of the bottle-making process by up to 90%.

This collaborative and innovative partnership is a big first step in decarbonising their supply chain.

The trial produced 173,000 Black & White Scotch Whisky bottles, also using 100% recycled glass. It is a first step in the journey to decarbonise this aspect of their supply chain. Further work now needs to be done to develop and scale the trial for future production, but it represents a significant step forward in Diageo's drive to transform the sustainability of its grain-to-glass supply chain.

The project forms part of a BEIS initiative, demonstrating the importance of government and business collaboration.

The project is part of the UK Government Department for Business, Energy and Industrial Strategy (BEIS) Energy Innovation Programme, within which Glass Futures is leading a £7.1m initiative to explore the most effective routes to switching glass manufacturing to low carbon fuels.

Sainsbury's: working with the value chain to reduce overall emissions

Last year Sainsbury's announced a commitment to invest £1bn over 20 years to become Net Zero across its operations by no later than 2040. This target includes Scopes 1 and 2 emissions, covering direct and indirect emissions within operations.

To take into account the impact of Sainsbury's supply chain emissions, they set Scope 3 targets to cover the value chain.

In 2021, Sainsbury's has taken their plan further with the addition of a Scope 3 target, which covers indirect emissions that occur throughout Sainsbury's value chain. They wanted to reduce the environmental impact of the business and work with farmers, growers, and suppliers throughout their supply chain to help those businesses reduce theirs.

To achive the highest standards for these targets, Sainsbury's worked with the Carbon Trust.

The Science Based Targets initiative (SBTi) has approved Sainsbury's targets for Scopes 1, 2 and 3. They worked with the Carbon Trust to define an ambitious Scope 3 target which requires the reduction of absolute GHG emissions by 30% by 2030, to align to a well below 2°C scenario.

The target includes reducing emissions from purchased goods, upstream transport and distribution, services sold, and customers' use and consumption of the products Sainsbury's sell. They have also committed to working closely with their vast global supplier base to help them develop and then meet their own targets.

Sainsbury's were awarded an A rating for its climate change disclosure for the seventh consecutive year, the only UK retailer to have achieved this. The company is also recognised by CDP as a Supplier Engagement Leader for its work engaging with its suppliers to tackle climate change.

Ryder Architecture: embarking on collaborative research partnerships to find new sustainable materials

The construction sector has established strategies to enhance building performance during the operational phase of a building's lifecycle. The sector must now focus its momentum on a reduction in emissions for the construction phase. Ryder Architecture can train individuals to design sustainably but they are limited by the tools and material library currently available. The current use of concrete, iron and steel in the wider sector alone produce approximately 9% of annual global emissions[1]. To evolve greener opportunities, Ryder Architecture is working with the industry supply chain and manufactures to push for innovative material solutions for design and construction needs.

Through partnerships with specialists, Ryder Archictecture is working to develop new materials for the sector to meet construction needs.

They have formed collaborative research partnerships with pioneers in material science to explore a new frontier of materials. This work includes advancements in nanotechnology with Thermulon, allowing for materials previously developed by NASA to explore a new frontier of carbon negative insulation. As well as partnering with innovators such as Sphera to demonstrate the use of carbon negative concrete in practice. Early results from this collaboration are demonstrating a lightweight concrete blockwork with a carbon footprint of -160kg CO_2eq/tonne.

These innovations in the sector also support wider environmental change.

These collaborative research partnerships focus on advanced materials, with material innovators to enable them to move closer to realising a circular economy and meeting Net Zero targets. Pioneering projects like this also provide a solution for other significant global challenges, such as the exploitation of natural resources and reducing plastic waste. Through research and collaboration, Ryder Architecture is focused on improving the world around them.

[1]Achitecture2030. (2017). *New Buildings: Embodied Carbon*. Retrieved from https://architecture2030.org/new-buildings-embodied

Waste management

Reducing waste is a key issue for organisations to move to Net Zero carbon emissions. A lot of progress has already been made in reducing wastage across supply chains, campuses and offices, complimented by behaviour change in the end consumer behaviour, aided by the government's efforts to cut down single use plastic usage.

But with COVID-19 driving the trend of working from home and online purchasing, as well as "grab and go" purchasing, organisations are again leading the way in finding ways to adapt, meet sustainability commitments and minimize waste in this new reality.

The following case studies show the contribution that a diverse set of organisations are making both to society and the planet through smarter measurement and innovative solutions to remove, reduce & re-utilise materials that would otherwise go to waste.

The pandemic has also supported some business areas in making progress against their long term sustainability targets. While also putting other areas at challenge, due to an increase of volume in carbon emitting supply chains.

Finally, there is a clear recognition of the need to collaborate, to move further and faster, and to bring the right people together across business, governments and communities to approach the issue holistically, driving lasting and positive change.

Summary: reusing, reducing and recycling waste

The following case studies show how organisations are working to measure and provide innovative solutions to remove, reduce & re-utilise materials that would otherwise go to waste. These discuss:

- Implementing organisational and operational-wide trategies on 6 R's:
    - Remove, Reduce, Replace, Reycle, Reuse and Refill
- Single-use plastics reduction
- Colleague, student and client engagement
- Investing in innovation to identify alternative materials to single-use plastics

Sainsbury's: a six point plan for plastic packaging

Sainsbury's were the UK's first major retailer to make a significant commitment to reducing plastic, pledging to cut plastic packaging by 50% by 2025

They have adopted a six-point plan, based around "6 R's" to manage their plastic; Remove, Reduce, Replace, Recycle, Reuse and Refill

- **Remove:** Since pledging to halve their use of plastic packaging by 2025, Sainsbury's has removed thousands of tonnes of plastic across the business, including eliminating 290m loose produce plastic bags, rigid plastic trays from produce (216 tonnes), plastic overlids removed from cream pots (114 tonnes) and zip removal on frozen fruit bags (28 tonnes). In the year ahead they will also be removing 18.5m plastic straws from their own brand lunchbox carton range.

- **Reduce:** Sainsbury's continue to redesign packaging to reduce the volume of plastic used. This year Sainsbury's delivered an 86% reduction in pancake mix packaging and 70% reduction in steak packaging (in the So Organic and TTD ranges). They are also working with Prevented Ocean Plastic to turn plastic collected from the coast into packaging for their strawberry and fresh fish range.

- **Replace:** This year, Sainsbury's trialled a new plant-based alternative for their own-brand teabags, using Polylactic acid (PLA) made from the sugars in corn-starch, cassava or sugar cane. This will be fully rolled out this year which will see 815m individual teabags a year moved from using oil-based plastic to plant-based plastic.

- **Recycle:** Using their facilities, Sainsbury's are able to help customers reduce their waste and put it to positive use, helping customers recycle unwanted clothing, metal cans, glass, plastic, paper and other materials at their managed recycling facilities in stores nationwide. This year they launched a trial for an instore recycling system for flexible plastics, allowing customers to recycle Polypropylene (PP) film found in several household products. They also provide front of store collection points for customers to bring back polyethylene (PE) film and carrier bags to supermarkets across the UK which are recycled back into carrier bags. Sainsbury's is continuing their work on piloting Deposit Return Schemes through their reverse vending machines where customers can recycle plastic, metal cans and glass drink containers in exchange for a 5p per item coupon towards their shopping.

- **Reuse and refill:** Sainsbury's is providing more sustainable choices for customers, including the option to purchase a reusable bag when buying loose fruit and vegetables, each made from one recycled bottle. They are also looking into refillable packaging options and have recently trialled an Ecover refill station, with dedicated refill points for detergent.

Middlesex University London: tackling plastic waste on campus

In line with many modern organisations, Middlesex University London operates a “grab and go” catering offer due to its convenience and flexibility. Unfortunately, this can generate a significant amount of plastic and plastic-coated waste that cannot easily be recycled.

At the annual Middlesex University Staff Conference in 2018, the former Vice Chancellor was challenged in an open forum about the University’s approach to plastic reduction which sparked discussion on how to instigate behavioural change. This led to the creation of a Reducing Plastics Working Group, composed of stakeholders from across the University.

Assessing the priorities of students and staff was a key determinant when setting out new sustaiabilty policies.

It was quickly identified that catering plastics were seen as a key priority by staff and students, particularly the use of single-use coffee cups and lids, due to their high visibility and litter potential. The Working Group reviewed various options around coffee cups, including the use of china, moving to reusable cups and implementing incentive schemes.

Middlesex found that the visibility of sustianbility schemes improved awareness of wider plastics issues and their use. Student and staff consulation also lead to a positive impact on the perception of the university.

Middlesex University Students Union were keen that students engaged with the project and had their say. A University-wide consultation was therefore launched, which led to the agreement that a 5p cup charge would be introduced, with the aim of reducing cup use and encouraging re-use. This was in addition to a discount offered for staff and students bringing their own mug.

To ensure continued momentum with the scheme, generated funds from the 5p charge are reinvested into environmental initiatives.

Income from the charge is ring-fenced for staff and student-led environmental initiatives. In the first six months, the scheme generated nearly £6,000 of project funding and avoided 350kg in coffee cup waste being generated and having to be recycled. Environmental initiatives that have so far been funded have been wonderfully diverse and have included a student garden, hedgehog houses, and hosting a film screening to raise awareness of climate change. The initiative also improved staff and student perception of how the University was managing issues on the plastics agenda.

Now looking ahead, Middlesex is looking to expand the scheme it to other areas, such as a deposit return scheme on other plastic items.

Acknowledgements

With thanks to:

CBI London Under 35 Committee

Special thanks to:

Rodney Appiah, Cornerstone Partners, London Under 35 Chair,
Alice Williams, Schneider Electric, London Under 35 Vice-Chair,

Andrew Cox, London South East Colleges
Anneka Hendrick, Birkbeck, University of London
Ben Cook, Babcock International
Camilla Goodwin, Diageo
Dominique Hudson, McAfee
Emily Daw, Bakkavor Group
Emily Hancock, Sainsbury's
Gemma Peach, Middlesex University London
Hannah Bryan, Ryder Architecture
Jamie Inkles, Goldsmiths, University of London
Martyn Didzys, AECOM
Nikhil Gupta, EXL
Sophia Spencer, BAE Systems

July 2021

Produced by John Stevens, Alistair Lamyman, Katy Recina and the London Policy team
To share your views on this topic or ask us a question, contact:

John Stevens
Associaste Director – London
John.Stevens@cbi.org.uk

Alistair Lamyman
Account Executive – London
Alistair.Lamyman@cbi.org.uk

Katy Recina
Senior Policy Adviser – London
Katy.Recina@cbi.org.uk