Foster + Partners

CSER Report May 2018 – April 2019



A message from our Head of Sustainability

IMPETUS FOR ACTION HAS NEVER BEEN GREATER

This year's report comes at a time when sustainability has never been more important. Against the backdrop of the latest report from the Intergovernmental Panel on Climate Change (IPCC), it is incumbent on all of us to forge a path forward that dramatically reduces the impact of our industrial production on the ecosystems on which we rely.

Governments are no longer able to ignore the impending climate and ecological crisis and organisations of all sizes are now confronting the business risks associated with environmental degradation, biodiversity loss and social inequality.

Activism in the area of ecology, and more specifically climate change, is hardly new but new public figures and movements such as Greta Thunberg and Extinction Rebellion have changed the paradigm of climate protests and unleashed a powerful global expectation that transparency, environmental stewardship and corporate responsibility are the costs of doing business today.

The construction industry is currently undergoing a drive to reduce its carbon emissions to net zero by 2050 in line with the aims of the Paris Agreement. It has embarked on a path of no return.

Foster + Partners intend to be a champion of sustainability as a design practice as well as an employer. We are committed to reviewing all policies, practices and procedures in order to achieve this.

Chris Trott Partner, Head of Sustainability

Opposite: masterplanning workshop.



Introduction

Foster + Partners is a global architecture, urbanism and design practice, founded in 1967 with sustainability at its core. The practice embeds sustainability in all its projects and uses its global influence to promote sustainable design around the world, to help move the built environment to one that is futureproofed environmentally, socially and economically.

We approach sustainability in our own business and on our campus the same way we do in our projects. Each year we identify the environmental, social and economic risks of our operational practices, and search for new ways to push our sustainability efforts further – minimising the impact of our operations.

We measure our approach to sustainability through our Foster + Partners Responsibility Framework. The Framework allows us to evaluate sustainability under ten key metrics: Wellbeing, Community Impact, Energy and Carbon, Water, Resources, Mobility and Connectivity, Land and Ecology, Social Equity, Planning for Change and Feedback. The metrics offer a broad and holistic methodology to assess sustainability performance.

This year we have made progress across all areas of our Responsibility Framework, with highlights including launching our Architectural Apprenticeship scheme, speaking out about our commitment to a sustainable future at UN events and in the press, and developing and enhancing the tools which allow us to understand our own environmental impact and the impact of our designs.



Trends and Outlook



Climate Crisis

The opportunity to prevent global warming rising beyond 2°C (1.5°C preferably) is diminishing – highlighting the urgent need for faster deployment of

low carbon and climate adaptation solutions. At Foster + Partners we understand that current efforts remain insufficient to change our course towards dangerous climate change. Recognising this, we are committing to strengthen our working practices to create architecture and urbanism that has a more positive impact on the world around us. We have joined several other founding UK architectural practices in declaring a state of climate and biodiversity crisis.

Climate Activism

Around the world a small but growing number of citizens are rising to challenge institutions, companies and governments to deliver a more equitable and sustainable society. They are increasingly using social media and other digital technologies to spread the message, elevate important issues and mobilise people. Citizen-led climate activism will keep the pressure on governments and companies to address pressing social and environmental issues. Expectations for companies to address issues such as climate change, single use plastics and gender equity will also continue to grow. Customers, especially the young, will increasingly shift their loyalties to companies they perceive to be delivering social and environmental value to society.

Climate Leadership

Addressing global stresses requires co-ordination among increasing constituencies of decision-makers. Fresh forms of collaboration are required that cut across familiar national, public-private, and industrysector boundaries, we need strong models for such collaborations, and they are immensely difficult to get off the ground because different parties remain focused on their individual foreground issues and responsibilities.

Our Approach



Foster + Partners Responsibility Framework

Developed almost six years ago by the Sustainability Group, the Foster + Partners Responsibility Framework is based on ten themes (Wellbeing, Community Impact, Energy and Carbon, Water, Resources, Mobility and Connectivity, Land and Ecology, Social Equity, Planning for Change, and Feedback).

These themes capture all the requirements of commonly used sustainability assessment methodologies including LEED[®] and BREEAM[®] and are well correlated to the UN Sustainable Development Goals. They also review social justice and equity concepts, which are often poorly captured by entirely environmental-based methodologies.

The Framework ensures we maintain a responsible approach to creating and evaluating buildings, products and cities, as well as operations on our own campus. The Framework is continuously improved and refined based on the feedback received. Our aim is always to improve the efficiency of data acquisition and knowledge transfer.

Six themes – Community Impact, Mobility and Connectivity, Land and Ecology, Social Equity,

Planning for Change, and Feedback – are reviewed and assessed manually using a range of tools. The remaining four themes – Energy and Carbon, Water, Resources, and Wellbeing – are assessed using Arc[®].

Visualising Green Building Performance

The Arc display system allows all staff to see our building performance. This data is then used to monitor progress, to better inform operational decisions by measuring improvement, and to benchmark our buildings against similar projects, locally and globally.

The device also offers a means for interaction with the building's multiple levels: visitors can 'see' the building's on-going performance on a physical device installed in the reception area in our Main Studio. Members of staff and other occupants can provide feedback on their experience and building managers can view trends and make informed decisions to optimise the building – benefiting people, planet and profit.

The data covers five categories – Energy, Water, Waste, Transportation and Human Experience – in a way everyone can understand and relate to.

Our CSER Programme

The concept of sustainability has been embedded within Foster + Partners since the practice was born in 1967 and sustainable design is a critical aspect of the services that we provide. Our expertise in this area means that we have always actively sought to reduce and manage the impacts of our operations. We also recognise that through our work as designers, the projects that bear our name have a direct impact on the communities that they serve and the wider environment.

Our CSER operational framework mirrors our project sustainability framework to ensure we practice in our day-to-day operations the sustainability principles we advocate in our designs. This also allows us to transfer innovative ideas between project and operational teams. Matthew Streets, Managing Partner, has overall responsibility for our CSER policy ensuring it is governed at the highest level.

Our Approach



Supply Chain

Our supply chain ranges from office supplies, technology and transport, to hotel accommodation and external contractors. Of all our supply chains, the flights and accommodation associated with our business have the largest environmental and financial impact.

The period from May 2018 to April 2019 saw us complete 15 projects across the world, from the West Coast of the United States to Kowloon Bay in Hong Kong. The global nature of our projects means there is a direct relationship between our business activity and our transport footprint. Travel-related emissions, when measured against per unit of turnover, have increased at a relatively low rate. This is partly due to the increased use of video conferencing technology; something we started monitoring in January 2016 to help track its impact on travel emissions.

Stakeholder Engagement

We engage with external organisations, our staff and suppliers to identify the significant impacts of our company and how we can best meet the needs of each relevant stakeholder.

Foster + Partners is a member of and actively collaborates with the following organisations:

- US Green Building Council (USGBC)
- Royal Institute of British Architects (RIBA)
- Chartered Institution of Building Services Engineers (CIBSE)
- Waste and Resource Action Programme (WRAP)
- Health and Safety Executive, Working Party Groups
- Centre for Window and Cladding Technologies
 TRADA
- British Standards Institute (BSI)
- New London Architecture (NLA)
- Confederation of British Industry (CBI)

Involvement with the United-Nations

The Paris Agreement, ratified in 2016, creates a multi-dimensional framework for economies to implement carbon reduction policies. Recent Conferences of Parties (COPs) on climate change have marked a turning point, with improved participation in climate negotiations from non-government actors, including businesses.

We continue to play a role in key global discussions around climate change and sustainability. In September 2018, we attended Global Climate Action Summit, hosted by the World Green Building Council (WGBC), a non-profit organisation dedicated to holding the construction industry to the goals of the Paris Climate Accord. At the Summit, we announced our signature to the Net Zero Carbon Buildings Commitment, meaning that by 2030 all buildings used by the practice will be carbon neutral.

In December 2018, we attended COP24 in Poland, where we shared our research into sustainable design and building methods. David Nelson, Senior Executive Partner and joint Head of Design, and Chris Trott, Head of Sustainability, spoke as part of an EU presentation on energy efficiency showcasing the work Foster + Partners is doing to truly reduce the carbon footprint of our buildings, rather than just considering piecemeal solutions.

Our deepening engagement with the United Nations is demonstrated through our continuous commitment to understanding what the Paris Agreement means for the built environment and sharing this information within the practice and the wider public. We do this via CPD (Continual Professional Development) workshops that we hold for all our staff to attend, as well as research and participation in expert events such as the Living Future Conference.

Foster + Partners is a contributor to the debate on climate change and champions progressive sustainability goals for the construction sector.



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1. Wellbeing



Approach

Foster + Partners aims to create an environment that allows our people to flourish and achieve their full potential. Our wellbeing programme is designed to protect and improve the environment for all building users, so they work in a healthy and positive space, feel supported whilst being challenged and developed, and can balance work with outside life. This helps us attract and retain a talented and ambitious workforce, who thrive in their work.

2018–2019 Performance Highlights

The wellbeing programme is led by our Human Resources department, supported by Health and Safety, Facilities, and several diversity and social committees. This system is successful because it embeds wellness and inclusion across the practice. We continue to offer several wellbeing initiatives to support a healthy lifestyle for our employees, including a variety of different wellness therapies, health checks (blood pressure testing, glucose and cholesterol testing, weight, height and BMI, lung health, and stop smoking campaigns) We also provide yoga classes with a variety of different membership options, subsidised appointments with our on-site wellness therapist and a large variety of teams and clubs for staff to join to support and promote healthy living and wellbeing.

Our Diversity Champions design and implement several events to educate, inform and develop a culture of inclusion. An inclusive work setting supports employee wellbeing through its positive effects on employee self-esteem; social connectedness and belonging; reduced discrimination, prejudice and harassment; and pro-social behaviour.

As part of our internal communications strategy, we launched a new HR Portal and redesigned our intranet, providing resources to staff on their employment, conduct and family-friendly policies. The newly designed portal also provides information on benefits including pension contributions and private medical insurance. Social clubs including climbing, football, group fitness classes at a gym located only a few metres away from our campus, golf, and yoga are all popular with staff. We also support the organisation of annual events such as the 'Foster + Partners Football World Cup' as well as an in-house sailing regatta. Our encouragement of physical fitness is complemented by healthy eating options in our staff canteen, including the introduction of a 100% vegan option every day.

Red List of Exclusion

Based on their research, our Materials Research Centre has developed a "Red List" of chemical content developed specifically for building materials. The list identifies the "worst in class" materials prevalent in the building industry. These materials have been designated as harmful to living creatures, including humans, or the environment. The list is primarily designed to inform our creative design process, allowing our designers to avoid specifying materials which cause harm, but will also be used to inform better procurement policies for green cleaning and small fit-out or construction works on our campus.

Indoor Air Quality

We achieve good air quality by providing outdoor air ventilation. This dilutes internally generated contaminants, so they do not reach harmful levels and the indoor atmosphere is pleasant and calm. Our ongoing data collection and regular review of potential new metrics allow us to improve quality continuously. Ceiling heights, air distribution systems and monitoring methods are different in each building on our campus, so we have adapted the ventilation rate requirements to each space.

Historically, we based our approach to indoor air quality on the American ASHRAE 62.1–2010 standard, the standard most frequently used in our projects. However, we always compare performance requirements against local regulations, in the case of our estate in London, these are the British Standards BS EN 13779. We consider our campus as a platform for conducting rigorous, transparent, and replicable testing of theories, design strategies, computational tools, and technologies that can then be migrated into projects.

We recognise higher ventilation rates benefit our staff, reducing the risk of occupant health issues and increasing productivity. We have identified a lower than expected performance in parts of one of our studios and we are investigating ways to improve ventilation. These will include redistribution of air on Level 3, improved extraction units and new air handlers in the roof to increase the amount of air and therefore indoor air quality. We are also exploring the possibility of bringing natural ventilation to our Main Studio.

The Campus of the Future

Our workplace team is currently developing a workplace survey, which we expect to run in the summer of 2019. The survey is intended to offer the opportunity for each member of staff to contribute with ideas and a vision of how we work more effectively in the spaces of our campus. Our objective is to better understand the actions our staff would like our practice to take to create balanced individual and collaborative spaces, improve health and wellbeing, support flexibility and remote working, retain talent and accommodate change.

Based the feedback from our Campus of the Future initiative we will work closely with our Sustainability and Workplace teams to analyse data and define guidelines and principles for use in future fit-out work, inside and outside our campus. We also plan to hold a wider range of events, celebrating the diverse cultural backgrounds of our staff.

2. Community Impact



Approach

We can conceptualise our community impact socially and economically, and we have a positive impact on the local area and the wider community from both angles.

2018 – 2019 Performance Highlights Opening the Studio

As we do every year, we opened the doors of the studio to the public in September 2018, as part of London's Open House initiative, welcoming over 2,000 visitors to explore an interactive exhibition on sustainable design.

Outreach

Architecture Apprenticeships

After last year's work leading a Trailblazer Group of 20 architectural practices to create the UK's first Architecture Apprenticeship Standards in collaboration with RIBA, ARB, and more than a dozen UK universities, the first cohort of apprentices started work this year, including four at Foster + Partners.

Economic Contribution

Foster + Partners contribute to the local economic dynamic in regions where the practice has established offices, as well as in suppliers' labour pools. Foster + Partners' employment footprint can be calculated at three levels:

- **1.** Direct jobs, which take into account the group's paid employment;
- Indirect jobs, which take into account employment generated by purchases of the practice among its suppliers and subcontractors; and
- **3.** Induced jobs, which take into account employment triggered by purchases within the local economy made by direct employees of the practice through the wages they receive and by the employees of Foster + Partners' suppliers.

This year Foster + Partners' projects from overseas generated 90% of the company's revenue, highlighting the global nature of our business and our contribution from overseas to the UK's economy. This is realised through our substantial tax contribution from our business, UK supplier spending, and salaries spent largely on rent – and with a substantial further amount spent within a close radius to our employees' addresses, a large proportion of which are within 2km of the campus. We are also a significant employer in Wandsworth, employing 1,099 people, up by 24 from the previous year.

Architecture in Schools

Architecture in Schools is a creative learning programme for primary school pupils, run by Open City. The programme aims to inspire the next generation of city-shapers and educate them about how architecture informs our world.

From February to July 2019, Foster + Partners partnered with a local primary school, leading them on an inspirational building exploration and working with students to develop their model city in response to a design brief set by Open City. Their final model, design sketches, design and urban planning notes and other reflections are all collated to form a final portfolio displaying their work and learning.

For the building exploration, we accompanied our students to see one of our buildings, City Hall. David Kong – a Partner at the practice who worked on the design – introduced the site and explained how the design process works, how the team evolved ideas and our approach to the masterplan and building itself. The students embarked on a tour of City Hall, discussing interesting features, analysing the geometries, identifying shapes and patterns, and completing bespoke activity books produced by Foster + Partners books as they explored and learned. We also took them up to 'London's Living Room', a terrace on the rooftop of City Hall offering spectacular city views. Here we taught the pupils about skylines and gave them time to sketch their own.

In the next phase our urban designers, artists and architects visited the school and ran three in-class workshops, encouraging the children to question and analyse how cities are built. From city layouts and mobility and the needs of a liverse population, the workshop explored the inception of the design process, spaces a city needs, and what future cities could look like. Where possible, we ied this back into the school curriculum – exploring geometric shapes in 2D and BD and investigating sources of renewable energy. At the end of the workshops, he classes had all they needed for our model shop team to hold a final session in May, where they built the students' model cities, ready for the portfolio submission in June.

We will expand our partnership with local schools to bring more pupils to our Studio, inspiring them to think critically about how cities work now and how they could work in the future. We will also continue to stay involved in the Architecture Apprenticeships programme, working with other practices and institutions to continue to expand access to the profession through alternative training routes. We will also look into ways to donate excess modelmaking materials which are not recycled easily to educational organisations and others who might make use of these materials.

3. Energy and Carbon



Approach

Our goal is to continually reduce our energy consumption and carbon emissions, both absolutely and in terms of consumption per unit of growth.

2018 – 2019 Performance Highlights

We continue to purchase renewable energy for our entire campus' electricity use, and Foster + Partners are proud to be a member of the RE100 initiative.

We have continued to push initiatives to use energy across our campus more efficiently, through acquiring and interrogating data more effectively. As well as this, we are continuing our outreach efforts to share our vision of net-zero carbon buildings and cities.

We developed a new tool - the CSER Viewer that allows us to aggregate various data sources and combine common traits to display information in a way everyone can understand and relate to. The CSER Viewer is an interactive web platform that analyzes and reports on key CSER data for our campus in London, building by building and floor by floor. The platform is primarily used by the Facilities and Sustainability groups to manage and communicate our CSER initiatives. The first iteration of the CSER Viewer focuses on energy use and energy efficiency across our campus. Users can select any date and time range to interrogate energy use at different times of the year, week or day. By looking at the data in this way we can understand performance and where efficiency measures can be implemented to save money and reduce carbon emissions. Further phases will include water use, transport, indoor environmental quality and carbon emissions.

Net-Zero Initiatives

In our previous CSER report, we committed to explore our involvement with organisations like the World Green Building Council and the International Living Future Institute. We shared with these two organisations, and several individual national Green Building Councils, our vision of net-zero carbon buildings and cities, based on the targets of the Paris Agreement. We also sponsored the World Green Building Council's Advancing Net Zero Initiative status report which was published in May 2019. Link to the report <u>here</u>.

Net Zero Carbon Buildings Commitment

In 2019 we were the first architecture practice to sign up to the Net Zero Carbon Buildings Commitment. By 2030 all buildings used by the practice will be carbon neutral. Our studio has joined 23 cities, including New York, London and Tokyo, in signing the commitment, which aims to reduce the built environment's contribution to climate change.

Improving Our Campus

While we source all of our electricity from renewable energy, it still makes sense to assess our energy use and look for areas of improvement in saving the energy we use. We are looking to both improve and better display the data we receive from our energy meters.



Foster + Partners Campus Energy Use Intensity is 321.4 kWh/m2/year¹.



Archtects Declare

This year we joined 16 other RIBA Stirling Prize-winning practices in a remarkable call-to-arms on climate change. The 'Architects Declare' initiative calls for a declaration of a state of emergency for the world's climate and biodiversity. It is a landmark statement in the UK that has, at the end of this reporting period, gathered more than 80 architect signatories. As part of this declaration, we have committed to:

- Raise awareness of the climate and biodiversity emergencies and the urgent need for action amongst our clients and supply chains.
- Advocate for faster change in our industry towards regenerative design practices and a higher Governmental funding priority to support this.
- Establish climate and biodiversity mitigation principles as the key measure of our industry's success: demonstrated through awards, prizes and listings.
- Share knowledge and research to that end on an open-source basis.
- Evaluate all new projects against the aspiration to contribute positively to mitigating climate breakdown and encourage our clients to adopt this approach.

- Upgrade existing buildings for extended use as a more carbon-efficient alternative to demolition and new build whenever there is a viable choice
- Include life cycle costing, whole-life carbon modelling and post-occupancy evaluation as part of our basic scope of work, to reduce both embodied and operational resource use.
- Adopt more regenerative design principles in our studios, to design architecture and urbanism that goes beyond the standard of net-zero carbon in use.
- Collaborate with engineers, contractors and clients to further reduce construction waste.
- Accelerate the shift to low embodied carbon materials in all our work.
- Minimise wasteful use of resources in architecture and urban planning, both in quantum and in detail.



We will report progress against the commitments we have made this year at least annually via our CSER report. As part of our upcoming Campus of the Future initiative, we will look to develop a new set of sustainability guidelines for fit-outs within our campus that can be applied first to the planned deep-renovation of one of our studios' floor and then to subsequent redevelopment work.

4. Water



Approach

When it comes to water and the built environment, there's a great deal to think about. Less than one per cent of the Earth's water can be considered useful for human consumption (the rest is saltwater or trapped in the polar ice caps) and of that one per cent, around fourteen per cent is used by buildings. Water is a limited resource. Typically, most of a building's water passes through the building and off-site as wastewater. This pass-through system reduces streamflow in rivers and depletes freshwater aquifers, causing water tables to drop and wells to go dry.

By collecting, managing and benchmarking performance data related to water-use, we now have a clear picture of how water strategies are affecting the campus' performance in this area. As with energy, we compare our water performance to other buildings across our portfolio in London, the UK, and globally. We measure all sources of water relative to our buildings, including appliances, fixtures, process water and irrigation. We use an 'efficiency first' approach, prioritising water-use reduction strategies and then considering non-potable and alternative sources of water.

This year we installed aerators in our showers and added a water module to our Campus CSER Viewer tool, which will help us better understand how we use water across our campus.

2018–2019 Performance Highlights

In our broader work, we understand the scarcity of potable water is quickly becoming a serious issue, as many countries around the world face severe shortages and compromised water quality. Even regions that have avoided these problems due to a historical presence of abundant freshwater are at risk: the impacts of climate change, highly unsustainable water use patterns, and the continued drawdown of major aquifers signal significant problems ahead. Designing water-responsible buildings and developments is therefore an important goal. This year we learned from design projects in densely populated countries incorporating Sponge City principles, where ecological strategies, mitigate flooding were employed on projects in India and China alongside supply collection and re-use strategies.



We are now assessing rainwater harvesting strategies and technologies for toilet flushing and irrigation. Using our research and what we learn about our water use we will develop a campus-wide rainwater harvesting strategy and run an information campaign to raise awareness about water conservation.

5. Resources



Approach

The conversation around materials spans every phase of a building's life cycle. It covers considerations about construction waste, specifying materials in the design and construction phase, making green cleaning choices while the building is in use and determining what happens to the building in the demolition phase.

We are committed to a long-term waste and material consumption strategy which will progressively adopt the principles of the circular economy (reducing, reusing, recycling and transitioning to circular solutions). Our aspirational goal is to become a 100% zero-waste-to-landfill practice by 2020.

2018–2019 Performance Highlights

Having moved to a new waste management supplier who offers more granular data to help us understand our waste, this year we are releasing the first waste audit report and presenting here the highlights. Within the reporting period of the CSER report we have:

- recycled 267,340kg of waste, or 2.3 kg of waste per week per employee.
- donated 246 meals to FareShare (an initiative to redistribute surplus food to charities to turn it into meals.)

Last year we recognised the conclusions of the Environmental Paper Network's Cupifesto and joined this international coalition of environmental and social NGOs in their call for an end to the throwaway culture. We have made the switch from plastic to biodegradable wooden cutlery, but still have work to do to find non-plastic alternatives for other catering consumables.

The Polylactic acid (PLA) cups we use for takeaway beverages must be composted in an industrial composting process which requires heat and oxygen, otherwise they do not degrade. We are aware the UK cannot deal with these cups and that the problem is particularly acute in England.

Despite a progressive move to plant-based compostable cups, inadequate composting facilities in England mean many cups still end up in a landfill. We are actively exploring solutions which will allow us to make the switch to a truly sustainable alternative. This is important for us as cups from our canteen and coffee bars have historically been the highest volume of waste in our general waste stream.

The chart demonstrates the breakdown of waste materials across our campus



We have undertaken a thorough review of alternative systems for the waste from canteen refreshments – including reusable cups – and are currently exploring the best way to implement a new way of managing the issue. We will replace our compostable cup with an alternative solution that does not require specialist disposal facilities or encourage a 'singleuse' culture. We are also investigating ways to simplify waste streams internally to reduce cross-contamination.

6. Mobility and Connectivity

Approach

Mobility and Connectivity evaluates how people move, with a particular emphasis on the campus and how they connect to the local area via different methods of transportation.

2018–2019 Performance Highlights

A key part of our agreed sustainable methodology, is that there will be a need for projects to seek carbon neutrality.

We already purchase our energy from renewable energy sources, but we recognise that there are further areas of improvement in mobility and travel. We have installed a trial electric charging station in one of our car parks to support our new electric van; in future years we hope to expand the number of charging stations we can offer. For some time, we have also been looking at offsetting more of our carbon footprint, mainly related to air travel. To achieve this, we will plant trees through approved schemes to provide the necessary carbon absorption to equate to our travel emissions. The Partnership Board has approved this offset.

The precise details of how we will do this are currently under investigation and we will report back when the offset is in place. We will also continue to aggressively seek ways to reduce our carbon footprint and reduce travel.



6. Mobility and Connectivity



We are in the process of rolling out a new videoconferencing system that will replace the four platforms currently in use, simplifying the 30,000 room-based conference calls we run every year and making virtual meetings easier and more attractive for staff.

At Foster + Partners we believe successful use of videoconferencing and collaboration tools is as much about design issues as it is about technology. It must be embedded as part of an overall strategy for enabling user experience and communication. To increase the number of calls and hopefully reduce our carbon footprint even further, we will rethink five spaces across our campus that are currently dedicated to meeting and conferencing to provide a better user experience and influence behavioural change.

7. Land and Ecology



Approach

Land and Ecology focuses on protecting and maintaining the ecosystems and natural habitats within and around campus boundaries as well as beyond our campus in the effects of our procurement. We have an impact on the natural environment directly through our on-site activities, and indirectly through the harvest and manufacture of products we purchase from our suppliers. To reduce the environmental impact of the products and services we consume, we procure with a green conscience and work with our local community to ensure our surroundings are well maintained.

2018-2019 Performance Highlights

Through a biodiversity assessment, we identified urban farming as an initiative that could contribute positively to our local ecosystem, improve the aesthetics of our campus, and provide sustainable food for our canteen and neighbours. To facilitate this, we selected two possible areas on our campus where we can test urban farming strategies. However, after a thorough investigation using refined models to assess the amount of food that could actually be produced, we decided to retain only one of these.



We will carry out a feasibility study to evaluate a proposed non-permanent greenhouse project and determine whether this is technically feasible and economically viable. The greenhouse could supply sustainable food for our canteen and serve as a demonstrator for urban farming strategies that could be implemented in our projects across the world.

8. Social Equity



Approach

Social Equity aims to ensure prosperity without exclusion, achieving added value through design optimisation and performance.

2018–2019 Performance Highlights

Gender Pay Gap

At Foster + Partners we continue to pay men and women equally for doing equivalent jobs across the practice. We believe in creating an inclusive working environment for all, which is based on merit and encourages our talented team to produce their best work.

We always try to ensure that our policies and practices are fair, including reviewing our pay decisions every year as part of our annual performance, pay and bonus review. We are pleased to report that our median pay gap reduced from 10.5% to 9.8% which compares favourably with the industry average of 23.6%. The main reason for the gap remains the fact that we have more men, with longer service, in senior higher-paid roles within the practice.

When we adjust for roles below Partner level, our median pay gap drops to 4.6%. Our median bonus gap has also reduced from 33.3% to 15.8% and when we adjust again for roles below Partner level, the median bonus gap stands at 6.3%.

Diversity and Inclusion

We appreciate the importance of creating an inclusive culture and believe it is key to running a successful business. We continue to support our `Diversity in Practice' initiative, expanding the work of the Diversity and Inclusion committee chaired by Matthew Streets, Managing Partner, and Charlotte Sword, Global Head of HR, and comprised of our 'Diversity Champions'. In addition to hosting our first Pride Celebration in 2018, in 2019 we will be sponsoring a competition for an architecture float in the Pride parade in London and planning our first Eid El-Fitr as a practice. eccemiber 2018

We will continue our efforts to achieve gender equality across all levels of our business. We believe inclusive and diverse teams drive innovation and achieve more. We also believe it's important that our workforce reflects our clients, their customers and the communities in which we operate. To support our goals and values, we will establish targets to regularly review and report our performance and adjust our working practices accordingly.

9. Planning for Change



Approach

Planning for Change encourages future thinking in the design process covering issues like climate change, certifications and technological developments.

2018–2019 Performance Highlights

Carbon reduction is critical. The Paris Agreement states that a 1°C increase in atmospheric temperature compared to pre-industrial levels is the maximum increase to avoid irrevocable change to all life on Earth. If we continue our current course, we are heading for a 3.7°C increase. We have twelve years before we reach an irreversible position in 2030.

Foster + Partners, in collaboration with others, have developed a methodology to quantify how much carbon is produced by buildings, including both operational and embodied energy. This enables us to consider alternative design strategies to reduce the carbon impact of our projects. This approach requires continuous monitoring in the design, construction and occupation of buildings to determine the final carbon output that each project achieves.

Even with the most efficient low carbon design, it is currently impossible to reduce carbon output to zero. Residual carbon must therefore be offset or compensated with different systems. This can be achieved in a variety of ways, from renewable energy to increasing reforestation to absorb more carbon. Foster + Partners will use all our design skills, leadership position in the industry and advocacy to convince our clients and collaborators to pursue this process in support of the ambition to contain atmospheric temperature increase to no more than 1.5°C. We will also endeavour to minimise the carbon impact of our own campus and locations around the world.



We plan to hold a series of workshops so that Partners directly engaged in the design process are better equipped to advocate for the adoption of the principles of the Paris Agreement.

10. Feedback



Approach

Feedback is concerned with a range of data collection and engagement issues, and how this information can be used to improve design and operations.

2018–2019 Performance Highlights

On our campus, our CSER Viewer provides regular, granular feedback on the sustainability of our facilities and operations. We continue to refine and expand this tool, installing more sensors and adding modules such as this year's water module to enable us to expand the number of criteria we consider. The natural next step is to find a way to extend this thinking to our design work. Following our research on the Paris Agreement and sustainability rating systems worldwide, we fully appreciate the significance of embodied carbon. We believe it's an issue that requires a more simple and efficient approach.

To tackle this issue we are developing an online platform to view, analyse and report on embodied carbon, which is based on our in-house campus CSER Viewer. The new tool – known as the embodied carbon viewer – has two primary inputs. Firstly, geometric building information in the form of Revit models is uploaded. The other primary input is a global database of materials and products, including the carbon impacts associated with materials extraction, transport, processing and manufacturing, localised to the project region. On the platform, the user can rapidly move around their fully visualised design, assigning products and switching them for alternatives to understand the potential carbon savings of materials sourcing. The tool integrates Revit models from different disciplines including structural, Mechanical, Electrical and Plumbing (MEP) and Architectural and Landscaping, automating a process that would usually take weeks, to just a few hours.



A new platform allowing all project stakeholders to better understand the embodied carbon breakdown of their project and empowering them to make the critical decisions needed to halt climate change has been created. Going forward we will bring new features and applications to the platform and report on them.

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