

Early 2020 has been a time of extraordinary turbulence. The COVID-19 pandemic has affected so many people around the world.

At Foster + Partners, we are focused on protecting our staff and supporting the communities where we operate. Our integrated teams have designed a general-purpose prototype face visor, suitable for cleaning and reuse for frontline healthcare workers. The design templates for the visor have been shared as an open source asset available for everyone to use.

How this will unfold in the short term is still uncertain, but we remain committed to creating buildings and cities that are healthier and more resilient.

At the same time, we are keenly aware of the longer-term challenges facing our society. In 2019, demands for urgent action on climate change grew ever louder. At Foster + Partners we share this sense of urgency. We continue to take climate action on many fronts, including tackling our own emissions and helping our clients reduce their footprint.

. We have made progress, but there is still a long way to go. We are confident we will achieve our goals if we keep sustainability at the heart of our approach.

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**Matthew Streets** Managing Partner



This report is structured around our ten themes of sustainability:

- Energy and Carbon
- Mobility and Connectivity
- Materials and Waste
- Water
- Land and Ecology
- Community Impact
- Wellbeing
- Prosperity
- Planning for Change
- Feedback

These 'themes' of sustainability are used to guide and monitor our CSER objectives for operations in the six buildings at our London campus. They capture 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.

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<sup>®</sup>.

Key Performance Indicators (KPIs) are used to assess progress in achieving our objectives, whilst targets for the next reporting year are outlined. Detailed progress against a number of indicators can be found at the end of each section.

The programme is governed at the highest level in the practice with Matthew Streets, Managing Partner and Spencer de Grey, Head of Design, taking overall responsibility and Christopher Trott leading the CSER process.

Finally, 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. We thank them all for helping us in our reporting.



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Opposite: Six buildings at our London campus.

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.

This year, as part of the COP25, the practice was invited to present its methodology for the measurement of embodied and operational carbon in each project by UNFCCC, UN Environment and the European Commission and the UK Government at their respective events and pavilions in Madrid. This achievement builds upon many discussions with the scientific community, standard setting organisations, green building rating system operators and industry leaders.

COP25 was also the occasion for the practice to launch its Sustainability Manifesto 2019 demonstrating the practice's ongoing commitment towards achieving the goals of the Paris Agreement.

For the second year running, we are funding forestry projects across the UK to capture our corporate greenhouse gas emissions. This year we will fund the planting of 83,640 trees on 47 hectares of land in locations in the Scottish Highlands, Cumbria, Notting and Newark, covering our Scope 1 + 2 emissions, and a subset of our Scope 3 emissions. Applying the manifesto's principles to its own operations, Foster + Partners has been purchasing 100% of its electricity from renewable sources for the past three years. The practice is also fully offsetting its annual global carbon emissions associated with transport (airline and vehicular), as well as those associated with heating and waste from its London campus.

Below: Chris Trott Head of Sustainability and David Nelson, Head of Design



At Foster + Partners, we continue to commit our considerable resources to take on the challenge of sustainability. As an integrated design practice, our specialist teams of architects, designers, engineers and other specialists allow us to develop novel approaches to tackle the environmental problems facing the world today.

Spencer de Grey

Senior Executive Partner, Head of Design

**Video links** 

**Climate Neutral Now: A Showcase of Voluntary Climate Action by the Private Sector** 

David Nelson

December 06, 2019 13:00 Location: Action Hub

Click here

**Embodied Carbon and the Paris Agreement,** a Methodology for the Construction Sector

Chris Trott

Date: December 07, 2019 Location: Action Hub

Click here



### **MPGCA Human Settlements: Climate emergency** - time to act for zero carbon cities and buildings

David Nelson

December 07, 2019 14:00 Location: Action Room Torres del Paine

Click here



### The COVID-19 crisis and sustainability

## The future will not be what will happen, but what we will do.

Henri Bergson

The current crisis has some common features with the climate crisis, which we entered some time ago and whose climax is looming on the horizon.

The deforestation maps of the Amazon and the Australian bush fires were early warnings that the continuous erosion of natural habitats is bringing us dangerously close to wildlife. With this, the potential of increased risk of zoonosis, these infectious diseases whose agents are naturally transmitted from animals to humans.

Air pollution today is suspected of transporting the Covid-19 virus on suspended fine particles, possessing the ability to cause lung damage, further enhancing our vulnerability.

Yet, the most difficult challenge remains ahead of us, changing our paradigms and rethink of our systems. It is a call to reinvent ourselves and eradicate a problem of which we are the main architects.

For the real estate-construction sector, this may translate into greater sobriety and honesty in all things, focusing on the demand for quality as opposed to that of easy and short-term gain.

A fundamental positive, is that we have no shortage of skills or tools to deal with them.

The use of carbon accounting and BIM, when they are extended to all stakeholders is an encouraging example that redefines our businesses, highlights the inconsistencies in our habits, and prohibits arbitrariness, or at the very least forces us to justify and account for it.

Hopefully, when the crisis comes to an end, the real estate and construction sector as well as society as a whole will be able, collectively, to assess with fresh eyes what makes the value of an object in a more responsible and more sustainable fashion.

### **Chris Trott**

Partner, Head of Sustainability





# $\Sigma$ Community Impact Wellbeing 09 13 **←**Ó Mobility and Connectivity Water 27 31 → Planning for Change Feedback 43 45

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Social Equity



The responsibility for the wellbeing of staff is spread across different departments in the company, which includes Human Resources, Health and Safety and Facilities. Our wellbeing programme is designed to protect and improve the environment for all staff, enabling them to work in a healthy and positive space, feel supported whilst being challenged and developed, and promoting a positive work life balance.

### Top Employer

Foster + Partners was named as a Top Employer for the fourth consecutive year in 2020, reflecting the supportive working environment offered throughout the practice.

### Health & Safety

There are several active clubs that include yoga, sailing, basketball, cycling, triathlon, softball, football and many more. In addition, we partner with local gyms to provide a discount for our employees.

### **Covid-19 Pandemic Response**

### Learning for Children

Throughout lockdown in the UK, Foster + Partners ran the #architecturefromhome initiative to keep children entertained, while they were unable to attend school. The online activities were well received, with entries received from as far as Canada and Australia.



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Left: Our running team at the JP Morgan corporate challenge run, Battersea Park last year.

### Last year's commitments

In June 2019, the workplace consultancy team was tasked with exploring how our London campus could be improved. The objective was to develop a deep understanding of how we work, collaborate and learn and socialise, and how the campus might better support these activities. All employees were asked to respond to a survey sent out by the workplace consultancy team.

We are using the results of this exercise to inform our vision for a new "Campus of the Future".

### Our goals for next year

We have developed software to gain a better understanding of the impact of improved air quality on our workspaces. We will get this data from both natural and mechanical ventilation and use this to inform our transition to natural ventilation for 95% of our occupied spaces.

### Motivational Talks

The practice organised several motivational talks that were delivered – both in person and online during the lockdown – from extraordinary individuals including, Lizzy Hawker, Sally Kettle and Eddie ' The Eagle' Edwards.

### Daily Tips

The intranet featured several 'daily tips' for staff members to ensure a healthy work-life balance throughout the lockdown.

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Below: Production of our visors in late March, as London faced the Covid-19 crisis.

# The health and wellbeing of our staff is essential to effective performance. We take a proactive approach to workplace wellbeing amongst our workforce.

### Charlotte Sword

Senior Partner, Head of Human Resources







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We believe that good design can improve the quality of people's lives and the communities they live in.

### Education

We also invest our time and skills, as well as financial support, in educational and charitable initiatives. The 'Architecture Trailblazer' – the UK's first architecture apprentice scheme continues to give valuable experience and learning opportunities to students from a wide range of backgrounds. We have strong links with the Stephen Lawrence Trust – each year four apprentices work and train in the office.

The practice is also a sponsor of the Academy of Urbanism, Young Urbanists – a not-for-profit organisation for the next generation of urban leaders, thinkers and practitioners. The past year, we supported them by providing events space, printing of media material and filming events.

### Charitable activities and outreach

Our charitable activities include contributing to the Macmillan Cancer Support and Crisis, while hosting the annual Maggie's Culture Crawl and Open House Weekend. There are a number of pro-bono projects within the office including a community boathouse in New York, reimagining children's playgrounds in London, and refurbishing London Zoo's Snowdon Aviary to create a new home for Colobus monkeys. This work aims to create new opportunities and a better future for all.

### Plus+ The Foster + Partners' journal

We also launched our journal "Plus ", offering in-depth insights into our projects, philosophy, people and process. Plus will give a space and voice to people within the practice and other experts and allow the public to profile design innovation, engage in industry-leading discussions, share ideas that underpin architectural work and create connections between projects and the wider issues that affect the built environment today.



Opposite: The Macmillan cake sale.





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Right: 1,000 visor masks produced in a day

### **Covid-19 response**

To aid the fight against Covid-19, Foster + Partners designed a general-purpose prototype face visor, suitable for cleaning and reuse. It is specifically aimed at fast mass production. We shared the design templates and material specifications as an open-source design asset. This is to encourage both designers and in particular large-scale manufacturers to investigate the potential of digital and laser cutting machines as an alternative to 3D printing technology. Since beginning production of our original design

Since beginning production of our original design in late March, we have made and donated over 40,000 visors to many hospitals including, Chelsea and Westminster, The Royal Free, Great Ormond Street, St George's, Croydon, Kingston, Nightingale, St Stephens and by our local Wandsworth GP network and other carers.

### Last year's commitments

### Our goal for next year



Foster + Partners created a functioning prototype of a smartphone app that illustrates the environmental impacts and carbon footprint of a person's activities. The initial prototype used motion inference to understand whether a user was commuting by vehicle, bicycle or foot and would provide estimates of the carbon footprint of their journey.

### **Francis Aish**

Partner, Head of Applied Research and Development



We have continued to push initiatives to use energy across our campus more efficiently, through acquiring and interrogating data more effectively and installing more efficient equipment. We purchase renewable energy to cover our entire campus' electricity use, and are a member of the RE100 initiative.

### **CSER** Viewer

We have developed an in-house tool to visualise our campus's environmental performance to provide us with a more intuitive way to view information and inform our decision-making. This involved the creation of a unique data repository that can be easily maintained and used to inform any future initiatives.

### Last year's commitments

We have achieved the measures outlined in our previous CSER report, which included acquiring new boilers with higher energy performance ratings, installing LED lighting on the ground floor of our Main Studio, purchasing an electric van to transport staff and materials from the campus to our workshops.

The "Campus of the Future" initiative is being reviewed in light of the current crisis.

### Our goals for next year

Over the past few years we have been improving our energy efficiency across our campus and on average, our energy use (electricity and gas) for this year is of 155,517 kWh per month.

Under normal circumstances we would commit ourselves to a reduction target for next year, but we must acknowledge the challenges the Covid-19 crisis poses. We will be maximising the circulation of fresh air through mechanical and natural ventilation in our buildings. However, as our staff continue to work from home, there may be a positive impact on other areas such as printing and carbon emissions from daily commutes. We will continue to study the impact on our operations and evolve a new energy strategy over the next twelve months.

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Right: Total energy consumption by building (electricity and gas)



### **Covid-19 Pandemic Response**

The impact of the lockdown in terms of our energy performance can be seen on the graph below. Within 13 days of the week commencing on Monday 16<sup>th</sup> of March all our staff were working from home.

ELECTRICITY MONTH COMPARISON 2019/2020 (kWh)

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The carbon associated is 'avoided carbon' based on if Foster + Partners were sourcing electricity from the grid. As all the electricity on the Foster + Partners campus is sourced from renewables the true value is negligible.

### .**........................** kWh 2019



## 140,000

| MAR     | APR |
|---------|-----|
| JAN FEB |     |

Higher energy use in January and February attributed to a higher staff count (2%) and roll out of new IT security infrastructure

As part of our commitment to managing our environmental impact, we have continued to make reductions in our carbon consumption by improving our performance, control and energy monitoring systems. This has given us a more detailed understanding of individual building operations to enable a tailored approach to energy usage, linked to our business requirements.

### **Piers Heath**

Senior Partner, Environmental engineer



Through research, we are able to understand what diversity of technologies are available to suit the requirements, clarify green labels and certifications and push the manufacturers to gain better transparency on their production.

### MRC + IC

Environmental Product Declarations (EPDs) are an excellent standardised resource in the industry, serving as a fact sheet for what impacts a product has on the environment. For some time, the MRC+IC has been researching available EPDs, advocating and encouraging manufacturers to create them in order to achieve greater transparency for materials. Research is ongoing so that projects may eventually specify the products and businesses that have the best potential to limit environmental impacts.

### Our operations

In terms of our own management of materials and waste, we work closely with a range of waste management partners from the cleaning team managed by Peartree Cleaning Services Ltd. to the waste contractor BPR.

Our waste disposal performance is managed through monthly updates provided by the waste contractor which are then incorporated into our monitoring tools, whilst we manage the front-end process of procuring recyclable materials through regular contact with our suppliers and our Materials and Research Centre.







Cardboard 5% Gral. waste 38% Main waste stream

### Last year's commitments

### Our goals for next year

### **Covid-19 Pandemic Response**

Central to our ethos is an appetite for enquiry, discovery and understanding. By maintaining a commitment to research – one of our great strengths as a practice – we are not only up-to-date with new developments and techniques, but are also able to thoroughly evaluate their relevance and technical performance for individual projects

### **Divya Patel Orbesen**

Partner, Head of Information Centre and Materials Research





We monitor our water consumption through manual water meter monitoring. Our Facilities team is responsible for managing any maintenance issues that may affect leakages and excessive discharge.

### **Project GROOF**

This year Foster + Partners took part to the EU's Interreg financed project called "GROOF" for "Greenhouses to Reduce  $CO_2$  on rooFs". The idea of the project is to use roof greenhouses as powerful equipment with the aim of:

- recover the heat produced and not consumed by the building actively (by the ventilation and heating system) and passively (30% waste heat through the roofs on average) in a plant production;
- collect CO<sub>2</sub> produced by people and building activities to "feed" plants;
- reduce CO<sub>2</sub> emissions from transport by producing plants locally.

This is project is at the crossroad between energy and carbon, thermal performance, heat island effects and indeed irrigation and water usage.

Our Urban Design teams will continue to be involved with our European partners to the identification of barriers and opportunities in order to provide the best suitable guidance to the future project carriers located in North West Europe.

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**Below: Our London office.** 



### Last year's commitments

We have completed our investigations and have devised strategies and technologies to reduce water demand and water usage, particularly for irrigation as we plan to add much more greenery in our campus.

### Our goals for next year

Given the current circumstances surrounding the Coronavirus pandemic, our plans have been affected, making it difficult for the time being to commit to a target, which we would have express in terms of water consumption/employee. We will report on the incorporation of new technology and design strategies to minimise water usage over the next twelve months.

### **Covid-19 Pandemic Response**

At the time of writing, preparations are well under way for a very limited return to our London campus. Initially the showers will not be open. This will have an impact on both water demand and consumption for the foreseeable future.

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Below: London campus main entrance.



## The global population is growing fast, and estimates show that with current practices, the world will face a 40% shortfall between forecast demand and available supply of water by 2030. We are exploring how to better conserve and protect resources, recycle storm water and wastewater, and develop non-conventional water sources in addition to seeking opportunities for enhanced water storage.

Mike Bass Partner, Head of Facilities



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We monitor emissions and advocate low carbon vehicles for travel where possible. We also work with employees to ensure that they are aware of sustainable transport choices and provide in-house facilities to encourage low carbon forms of transportation.

### Carbon neutrality

For the second year running, we are funding forestry projects across the UK to capture our corporate greenhouse gas emissions. This year we will fund the planting of 83,640 trees on 47 hectares of land in locations in the Scottish Highlands, Cumbria, Notting and Newark, covering our Scope 1 + 2 emissions, and a subset of our Scope 3 emissions.

### Last year's commitments

Last year we committed ourselves to roll out a new videoconferencing system intended to replace the four platforms currently in use and simplifying the 30,000 room-based conference calls we run every year.





### Our goals for next year

Next year we will implement the roll out of the video conferencing software, and bring in the learning from the Covid-19 response and staff working from home. We are committed to a zero-carbon future. Delivering this is no mean feat and we are conscious of the challenges it represents but we commit ourselves to maintain carbon neutrality in our operations next year as well. We will offset all our emissions from flights while diversifying carbon capture strategies.

We will implement the roll out of the video conferencing software and bring in changes based on learnings from our Covid-19 response and staff working from home.

| <br>2019 |
|----------|
| 2020     |



The Covid-19 pandemic has transformed the way we live our lives. Significant and longlasting repercussions will be felt across society and industry, many of which are sure to influence the way we approach the design of our buildings and cities. The Urban Design team at Foster + Partners has been exploring how recent and fast-moving developments in urban planning – instigated and encouraged by the current crisis – will affect and shape the future of our home city and others worldwide.

**Bruno Moser** Partner, Urban designer



Land and Ecology focuses on protecting and maintaining the ecosystems and natural habitats within and around campus boundaries as well as beyond our campus through our procurement systems.

### Campus of the Future

In June 2019, the Workplace Consultancy group was tasked with exploring how the Foster + Partners Battersea campus could be improved. The objective was to develop a deep understanding of how we focus, collaborate, learn and socialise and how the campus might better support these activities.

This exercise involved more than 50 face to face interviews, a vast survey, workshops and an observational space study.

One of the outcomes is a strong desire for more green spaces in the campus and we are looking at ways to do so in the future.



Right: A workshop discussing the campus of the future.

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### Last year's commitments

### Our goals for next year

### **Covid-19 Pandemic Response**

Biophilia has a very important role to play here. It can help with social distancing strategies, clearer circulation systems, privacy and calm and elevate the spirits. Our plans for the future of the campus already included a significant increase in greenery, the current crisis has only reinforced our commitment to biophilic design.

The empirical evidence for the beneficial impact of nature on human health is plentiful.

### Alessandro Ranaldi

Partner, Head of Workplace Consultancy



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

### Diversity and Gender Pay Gap

At Foster + Partners' men and women are paid 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 continue to try to ensure that our policies and practices are fair, including reviewing our pay decisions each year as part of our annual performance, pay and bonus review. Our median for pay is 8.8%. Mean for pay is 22.6%. Bonus is 24% at Median and 88% at Mean. The reason our mean bonus pay is higher in comparison to the mean, is that the we have more men in senior positions than women.

### Cookbook

We put together a cookbook called 'Origins' that celebrated the diversity of the practice. With contributions from various members of the practice, a print run of 500 copies was available for staff to purchase in the lead up to the ethnicity festival in November 2019. Sales of the book, which amounted to £9,225 went to the Trussell Trust Wandsworth Foodbank.

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Below: The Origins cookbook.



### Pride

The LGBT+ Network at Foster + Partners represents a thriving community, offering a celebratory and supportive, safe space for socialising and discussion within both the practice and the wider architectural and construction industry. Notable mentions from 2 include the return of the annual Pre-Pride party for members in July, hosted at our Riverside Studio, wit captivating talk from guest speaker Ali Hannon. Staf also encouraged to submit an original artwork desig be used as the logo for the LGBT+ Network, which w also displayed on Foster + Partners t-shirts for Lono Pride; a logo that unequivocally reflects the celebrat and support of all sexual and gender identities.

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Below: Ali Hannon talks to the office.



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Furthermore, as Architecture LGBT's platinum sponsor, we have been able to help facilitate and support numerous events within the community, including our involvement in Pride brunch events hosted throughout the UK, both winter and summer parties and also our participation in the Float Competition focused upon the theme of 'Breaking boundaries', where our entry was placed in the final three.

### Last year's commitments

Last year we committed ourselves to continue our efforts to achieve gender equality across all levels of our business and report progress this year.



### Our goals for next year

We believe passionately that diverse and inclusive companies make for more innovative, engaged, and happy teams, and we speak with forward-thinking talent leaders all the time who feel the same. Going forward we will report on the following:

- Percentage of employees to submit responses
  in an initial diversity survey
- Number of internal events/trainings with a target number of attendees
- Number of diverse candidates in our pipeline, or interviewed for a role
- Number of blog posts about our culture written by current employees
- Number of job descriptions overhauled for inclusive language

Your diversity does not define your ability and ambitions – although believing that you are unique is one of the greatest assets.

Narinder Sagoo Senior Partner, Art director



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

### Timber Group

Engineered timber is still a relatively new technology in construction, and there are key differences to understand compared to steel and concrete construction; the ongoing debate around fire performance being of particular importance. To explore the safe use of timber to a greater extent in our projects, a Timber Group has been convened, pulling together experts from our architectural, structural, materials, environmental, sustainability, fire, and construction teams.

### Last year's commitments

Last year we committed ourselves 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. We have trained 49 partners/senior partners and will continue to train more this year.

### Our goals for next year

Finding new ways of collaborating and learning, and finding technological solutions, will be key. We commit ourselves to make available the training on the adoption of the principles of the Paris Agreement to the entire practice.

Below: Kulm Eispavilion. Cantilevering roof forms a partially sheltered space.



I consider that innovation is strongly associated with collaboration. it is through collaboration that technology and knowledge can be transferred.

**Roger Ridsdill Smith** Senior Partner, Design Director - Engineering



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

### Case study: Leva chair Mattiazzi, Italy, 2019

Leva is the first timber chair designed by Foster + Partners. Manufactured by Mattiazzi, it combines craftsmanship with sophisticated machinery to create a comfortable and ergonomically designed chair rooted in the idea of sustainability.

Each step was explored and analysed in close communication with Mattiazzi's team so that we could utilise sophisticated machining and more traditional methods of manufacturing to best effect. Made of ash sustainably sourced from Eastern Europe, the chair is designed and optimised to reduce the amount of waste generated during its manufacture. The pieces of timber discarded during the machining process fuel the heating system at the factory, supplementing the photovoltaic panels on the factory roof. As part of our sustainable initiatives, we have also commissioned an LCA / EPD for the leva chair.



### Solutions for Outdoor Climate Adaptation (SOLOCLIM) Our goals for next year

Solutions for Outdoor Climate Adaptation (SOLOCLIM) is a European Industrial Doctorate (EID) project in the programme Innovative Training Networks (ITN) and part of Marie Sklodowska-Curie Actions funded by the European Commission within the Horizon 2020 programme. The aim of SOLOCLIM is to develop a doctoral training programme that enables young researchers to generate solutions for urban outdoor environments.

Our effort is led by one PhD student in collaboration with the landscape architecture group of Wageningen University (NL). Within Foster + Partners, he will study the larger scale interventions using vegetation. This will involve the definition of sizes and distribution of green infrastructure (e.g. neighbourhood parks or urban forestry) as well as the integration of vegetation structure into new integrated designs of outdoor spaces that are fitted to new requirements of e-mobility, renewable energy systems and smart city infrastructure. The new infrastructures will be tested with microclimate simulations. The PhD student will be embedded in our London headquarters, in the environmental modelling and the urban and landscape master planning departments that closely cooperate.

### Last year's commitments

Last year we committed ourselves to bring new features and applications to a new platform to allow 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. This was presented at the COP25 in Madrid..

We will add new functionalities to the carbon viewer such as a carbon cost module and maintain our collaboration with scientists, scheme operators and the United-Nations.

### Initiative: Facade tool

We are committed to optimise and reduce every component of a building. This research project looks specifically at facades. We are developing a facade tool to help explore primary design and material parameters in a range of climates. It helps to understand the impact of glazing ratio and type in different climates; shading, daylight; and provides high-level design response to each orientation. This will result in establishing a methodology to understand and compare the effect of different facade choices on projects in different climate zones.

### **Foster + Partners**

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