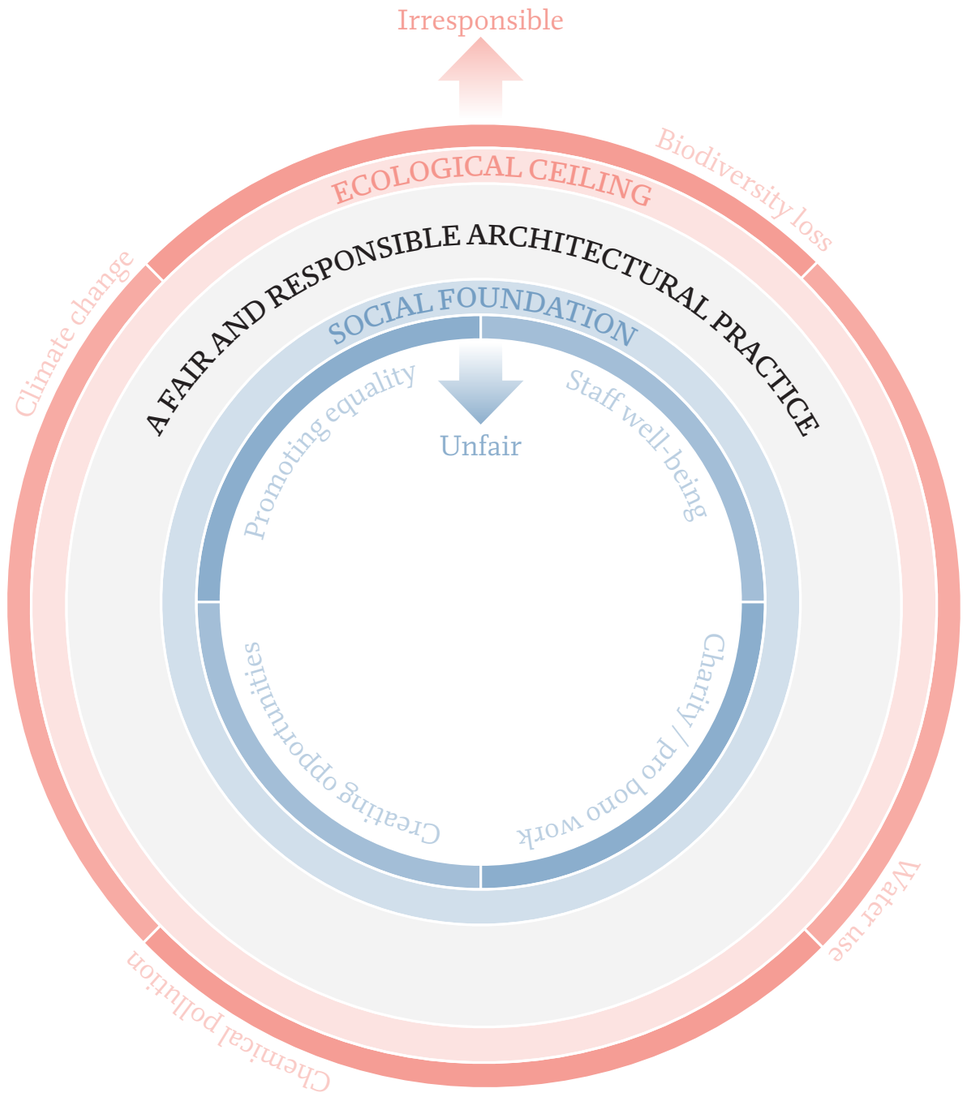
Sustainability Report 2021

Walters & Cohen Architects
April 2022



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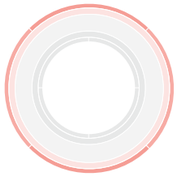
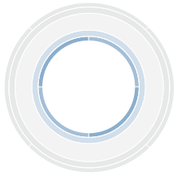




0.0 About this report - what on Earth is the doughnut?

Welcome to the second annual Walters & Cohen sustainability report!

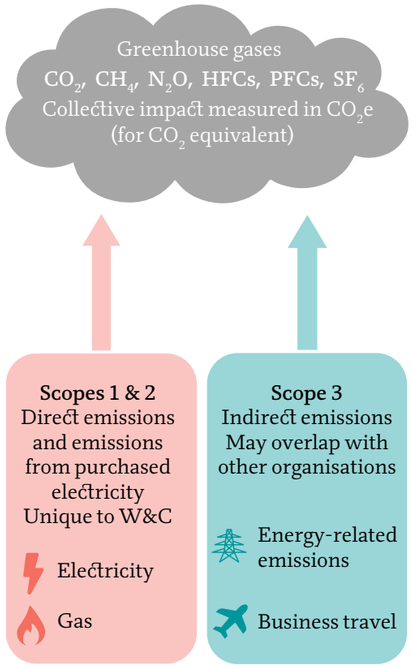
In writing this report, we have aimed to be holistic in our approach and to understand how our actions fit within a global and national context. Kate Raworth's 'Doughnut' provides a useful unifying image. The diagram is formed of two concentric rings. The inner ring is the 'social foundation', representing the basic needs and rights that we expect everybody in the world to enjoy. The outer ring is the 'environmental ceiling' – the maximum stress we can put on our planet and its systems. The space between the two rings is Raworth's definition of sustainability: the 'safe and just space for humanity'.[1]

Kate Raworth's original Doughnut had 12 'inner ring' categories, based on the UN's 2015 Sustainable Development Goals, and 9 'outer ring' categories based on a 2011 report by a group of Earth-system scientists. Many of these categories are difficult to relate directly to a UK architectural practice, so we have devised a personalised Doughnut. The 'ecological ceiling' issues we can act on are climate change, biodiversity loss, water use and chemical pollution. Our 'social foundation' includes promoting equality, creating opportunities and staff wellbeing. We also contribute to a broader range of social issues by donating and offering our services to charities for free.

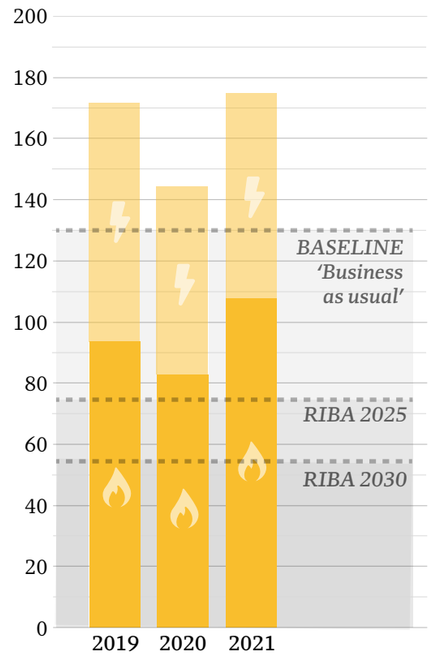
This is primarily a report on the impact of our office rather than our projects. However, we recognise that the impact of our projects is many times greater than that of our office, so our buildings are also addressed. This is a work in progress for future reports.

Enjoy reading! We are happy to discuss any queries - please direct these to mail@waltersandcohen.com.

1.1 Climate change



Defining our carbon footprint



2 Wilkin St. Energy Use Instensit (kWh/m2.year)

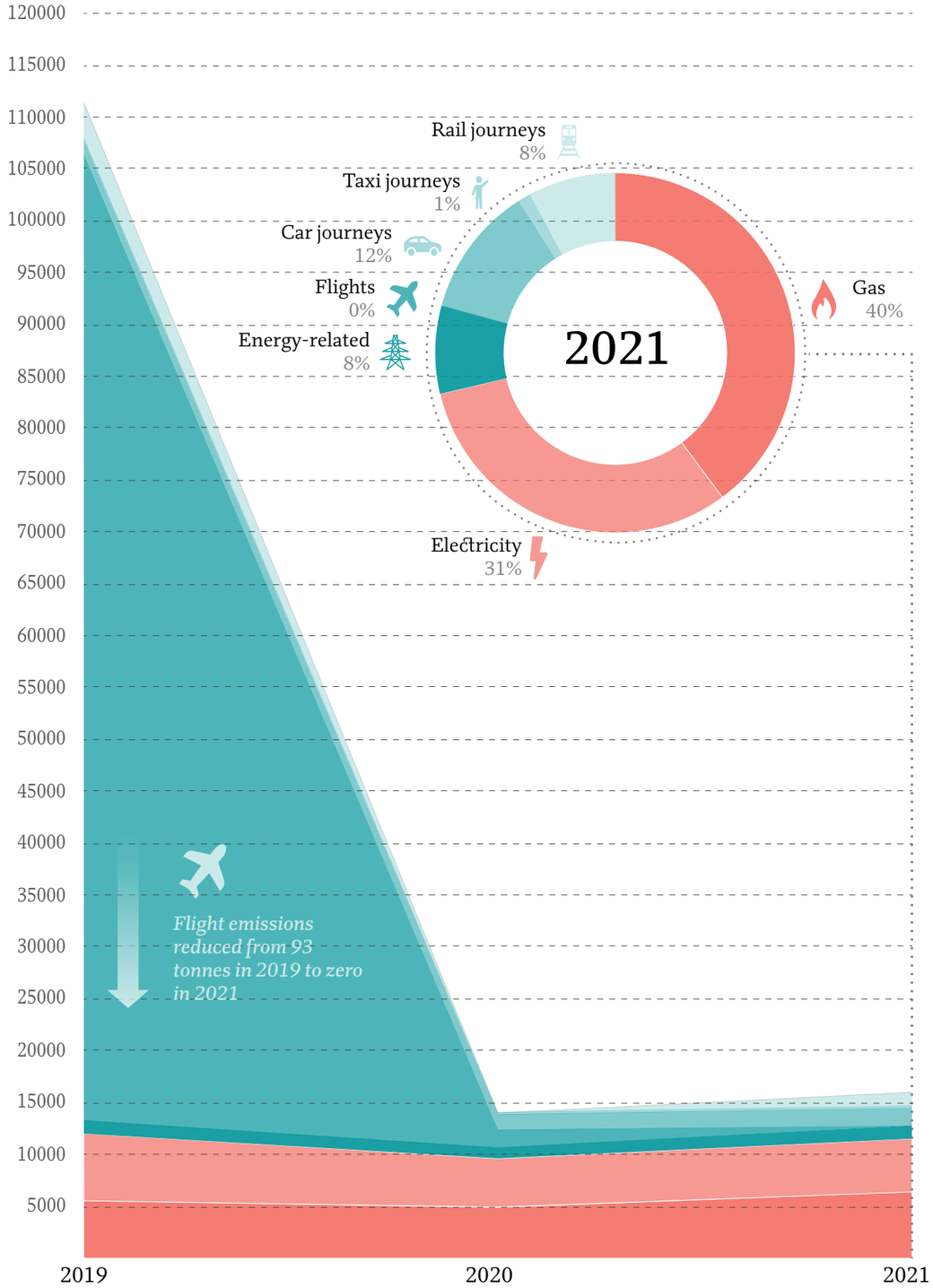
What is the bigger picture?
The consequences of global warming are potentially dire and far-reaching. They include (but are not limited to) sea level rise, drought, reduced crop yield and ecosystem destruction. The 2018 Special Report on global warming by the UN's Intergovernmental Panel on Climate Change predicted that these adverse effects could be significantly reduced by keeping warming below 1.5°C. To achieve this, emissions would have to reduce by 45% by 2030 (from 2010 levels) and reach net-zero around 2050.[2]

Our office carbon footprint
To make the biggest impact on our carbon footprint, we have to understand what the priorities are. To build up this understanding we have been calculating an estimate of our carbon footprint since 2019.

Methodology and scope
The GHG Protocol Corporate Accounting and Reporting Standard defines carbon emissions as Scope 1 (direct emissions), Scope 2 (indirect emissions from consumption of electricity) and Scope 3 (all other indirect emissions).[3] We have calculated our full Scope 1 and 2 footprint – for us that's gas and electricity consumption in the office – and two Scope 3 categories: business travel and energy-related activity. Energy-related activity is the carbon footprint of transporting gas and electricity to our premises (for example, distribution losses in the national electricity grid). Carbon intensity data comes from the UK's Department for Business, Energy and Industrial Strategy.

Analysis and recommendations
In 2019, the standout item in our carbon footprint was air travel, at over 80% of our footprint. We are fortunate to have projects around the world including China, Cambodia, Ecuador and Kenya; unfortunately this results in carbon-intensive long-haul flights. While face-to-face meetings and location visits are an important part of our work, the pandemic has normalised the use of video-conferencing technology, which has helped us keep our emissions much lower in 2020 and 2021.

Since 2020, the biggest slice of our carbon footprint has been gas and electricity use in our office. Considering that the building is a converted Victorian warehouse, our energy use is not exceptionally high. However, it is significantly higher than RIBA's 2025 and 2030 targets for new build offices. In 2021, energy use increased to beyond pre-Covid levels, even though many people were still working from home. This was probably caused by over-ventilation as a Covid precaution, leading to a higher heating demand. We will continue to review how we are using our office in 2022.



W&C greenhouse gas emissions over time ($kgCO_2e$)

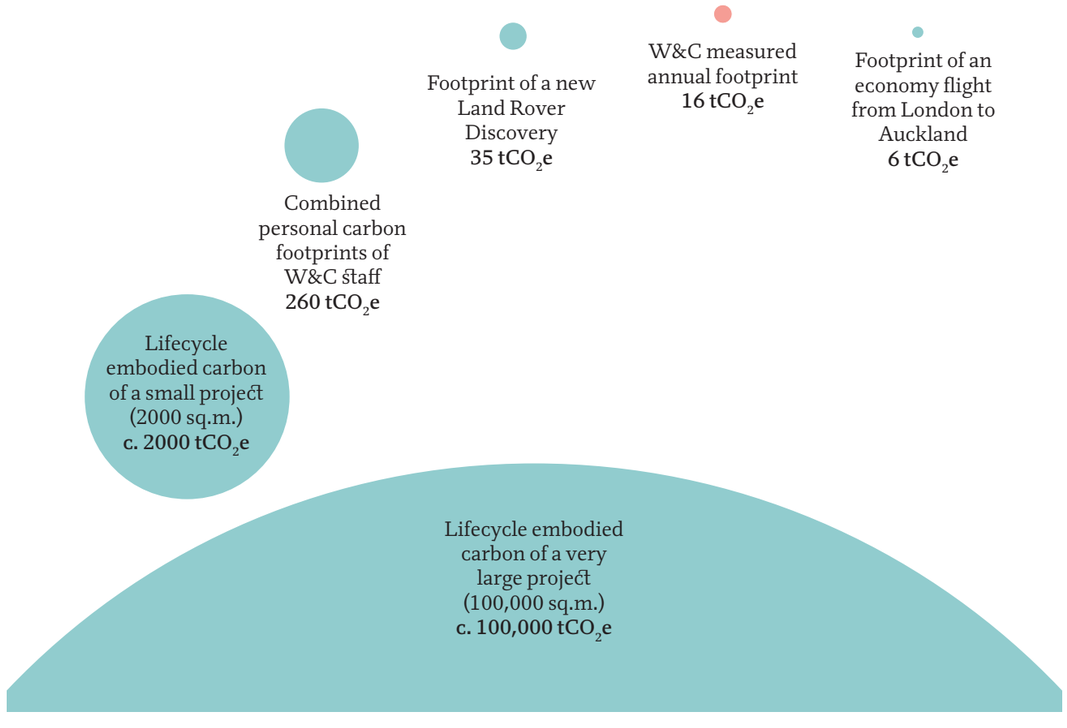
Net-zero, offsetting and green energy

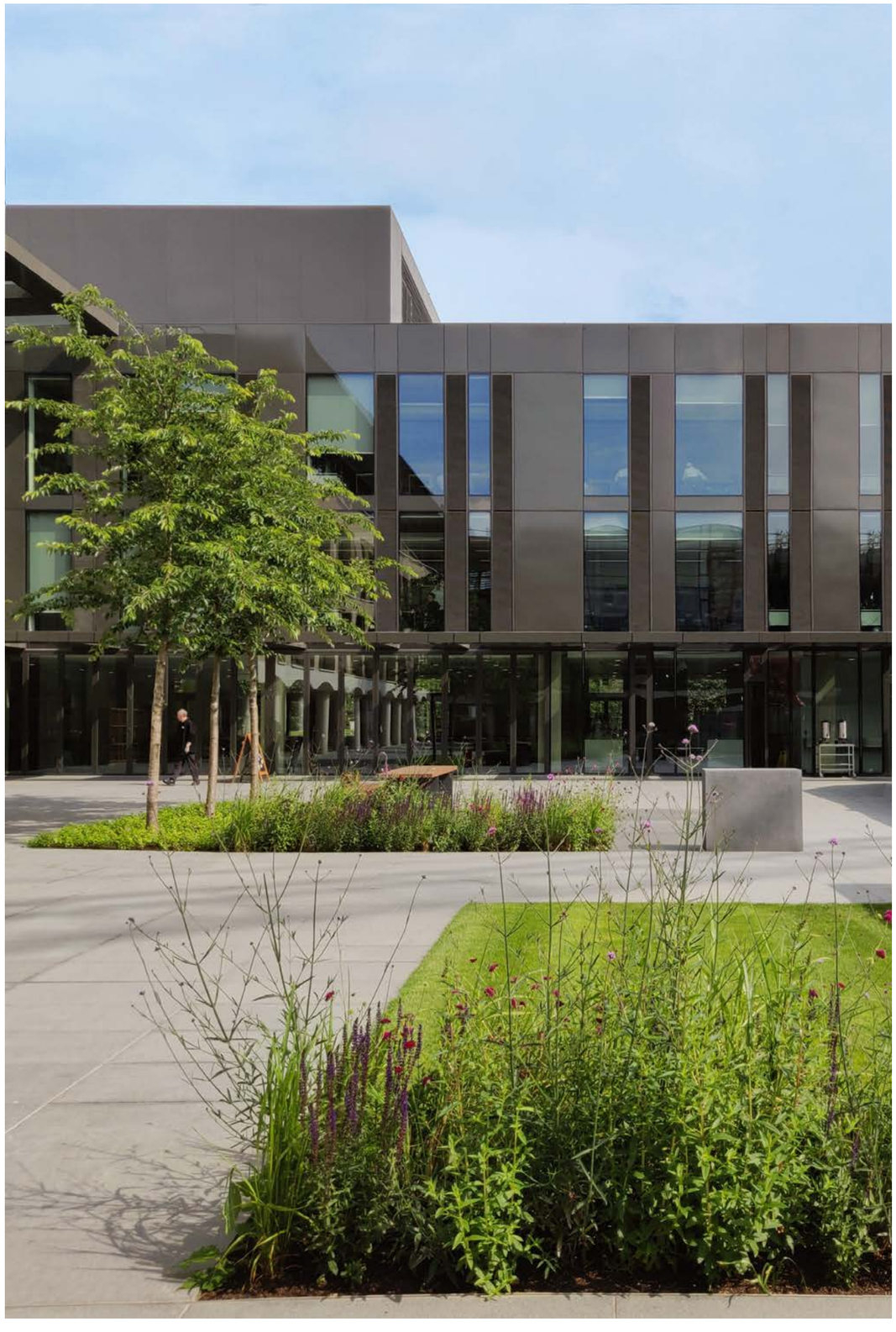
Carbon offsetting is an attractive idea, but often flawed in practice. The majority of carbon offsetting schemes do not actually remove greenhouse gases from the air, they just help somebody else to reduce their footprint (which is currently much cheaper). This means that achieving 'net-zero' through offsetting is cheap now, but would be much more expensive if everybody was doing it. Offsetting schemes that rely on planting trees also arguably underprice emissions, because reforestation needs to happen regardless to stay within the 1.5°C limit and there is only so much land available for planting.[4] We plan to review offsetting further, but for now have decided that investing time into working out how to reduce the footprint of our office and projects is a higher priority.

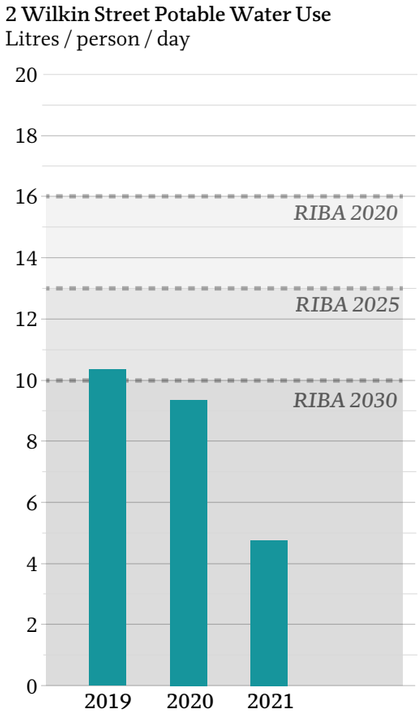
We are also exploring switching to a green electricity supplier when our contract comes up for renewal. Many claims of '100% renewable' energy supply are based on the purchase of Renewable Energy Guarantee of Origins certificates, which currently does little to increase national renewable supply. To make a real impact we need to buy electricity from a supplier that generates its own renewable electricity and/or buys directly from generators.[5]

What are we doing with our projects?

The whole-life carbon footprint of a single medium-sized project is many times the footprint of our office activities. Sustainable design is something we take very seriously. We have a track record of designing BREEAM Excellent and Very Good buildings – including projects at Lady Eleanor Holles School and St Paul's School (pictured opposite), which both achieved an Excellent rating – but we are always looking to improve. As signatories of Architects Declare, we are committed to increasing the use of Post Occupancy Evaluation (POE) and whole life carbon modelling on our projects. Three current projects already have whole-life carbon models carried out by external consultants; we are exploring how to bring quick and simple embodied carbon analysis in-house. We are also establishing a POE process to use on all our projects. This will improve our understanding of how the buildings we design are performing, and help our clients understand how to use their buildings most efficiently.







1.2 Water use

What is the bigger picture?
Demand for water in London (and the whole of south-east England) is a high proportion of available rainfall. The Environment Agency categorises these areas as seriously water stressed, meaning that demand for water is having negative environmental impacts.[6]

Our office water use
Our water consumption is around 5 litres per person per day - which is the RIBA Climate Challenge target for new buildings for 2030. This suggests that reducing our water use is not our highest priority. This is not a great surprise: the office WCs already have water-saving fittings and the shower is not heavily used. In future we will aim to collect water meter readings at more regular intervals to ensure that our data is accurate.

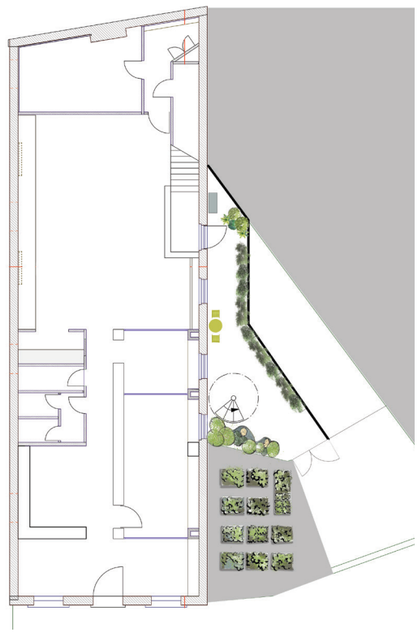
What are we doing with our projects?
The BREEAM standard which applies to many of our projects include credits for monitoring and regulating water consumption, leak detection and use of flow control devices.

1.3 Biodiversity loss

What is the bigger picture?
Globally, we are losing between 200 and 2,000 species per year.[7] The national picture is also concerning. The UK has adopted the UN's Aichi biodiversity targets, but in 2019, the government's self-assessment showed insufficient progress towards 14 of the 20 targets.[8]

What are we doing in our office?
Our office only has a small and restricted outdoor space, but lots of little efforts add up! A planting scheme was designed for the yard to the side of the building in 2019, but due to the pandemic has not yet been put into action. We are now researching how to adapt this scheme to make a small contribution to biodiversity in the yard: our plan for 2022 is to start with some pots to encourage butterflies and bees, such as hebes and lavender.

What are we doing with our projects?
We're lucky to work with some fantastic landscape architects. Biodiversity in our projects can take the form of botanically species-rich habitats, nesting and roosting provisions for birds and bats, and habitat management in the form of sensitive lighting and native planting. We will continue to encourage clients to include companies like Biodiversity by Design as part of the team.



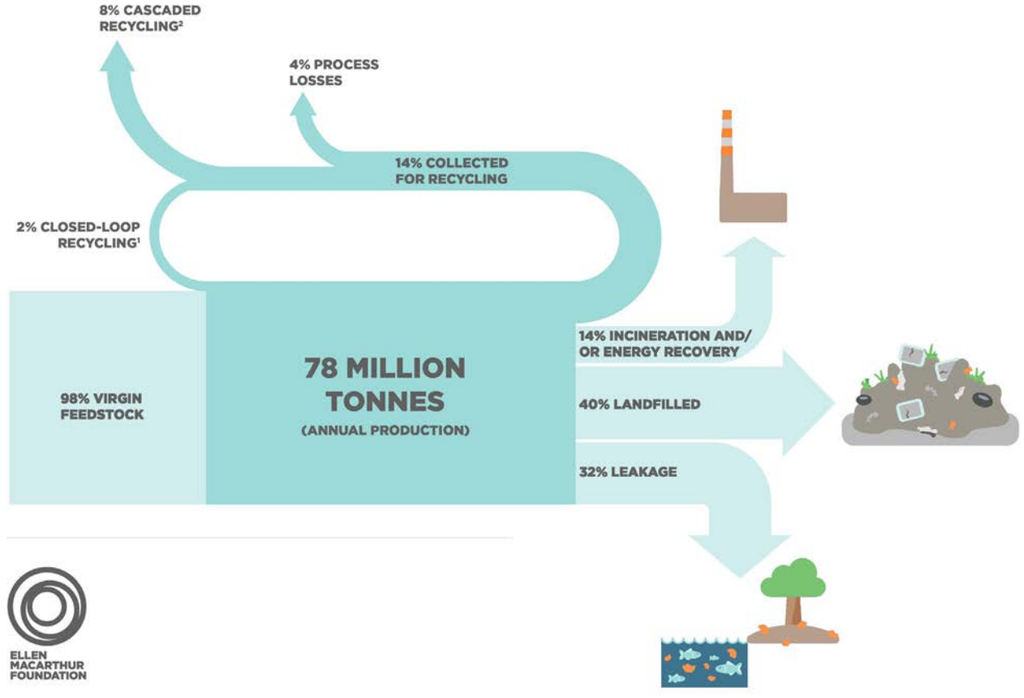
Planting scheme for the office yard

1.4 Chemical pollution

What is the bigger picture?
Toxic compounds produced by human activity can stay in the environment for a long time, and may accumulate in organisms and ecosystems. In 2021 the IUCN (International Union for Conservation of Nature) reported that 'At least 14 million tons of plastic end up in the ocean every year, and plastic makes up 80% of all marine debris found from surface waters to deep-sea sediments.'[9]

What are we doing in our office?
Our chemical pollution relates mostly to plastic waste. We already tackle this to some extent by promoting recycling and by sharing information about initiatives like the National Cup Recycling Scheme.[10] However, we recognise that recycling is not enough. Too often, materials are downgraded every time they are recycled and eventually end up in landfill anyway (a process sometimes referred to as 'downcycling' or 'cascaded recycling'). The diagram below shows how a small proportion of plastic packaging globally is recycled into similar products. We are currently trying to improve our understanding of circular economy principles and how we can embed these in our office and practice.

What are we doing with our projects?
Specifying non-toxic materials is part of the BREEAM certification process, which applies to many of our projects.



Global plastic packaging material flows, 2013 (diagram by the Ellen MacArthur Foundation)

Curling at Coal Drops Yard, February 2022

2.1 Creating opportunities

What is the bigger picture?
The long qualification process for architects can be daunting. We want to help young people from all backgrounds understand what a career in architecture involves and that it is a possibility for them.

What are we doing?
We have offered work experience for many years and in summer 2021 ran an online design school for twenty GCSE/A level pupils. We also run workshops in local schools and attend careers events at London schools. We will continue to represent our industry in this way and in 2022 are encouraging more of our staff to engage in outreach initiatives.

2.2 Staff wellbeing

What is the bigger picture?
The coronavirus pandemic has been a major threat to wellbeing. We are very glad to be back in the office with an improved flexible working policy that's helping preserve a good work-life balance.

What are we doing?
We are a sociable office and enjoy doing fun things together, such as curling, quizzes, making dumplings for Chinese New Year, sharing lunches, and sharing many birthday cakes. Events for Spring 2022 include our much-delayed Christmas dinner.

Mobile clinic for Kamili Mental Health Organisation, Kenya

2.3 Promoting equality

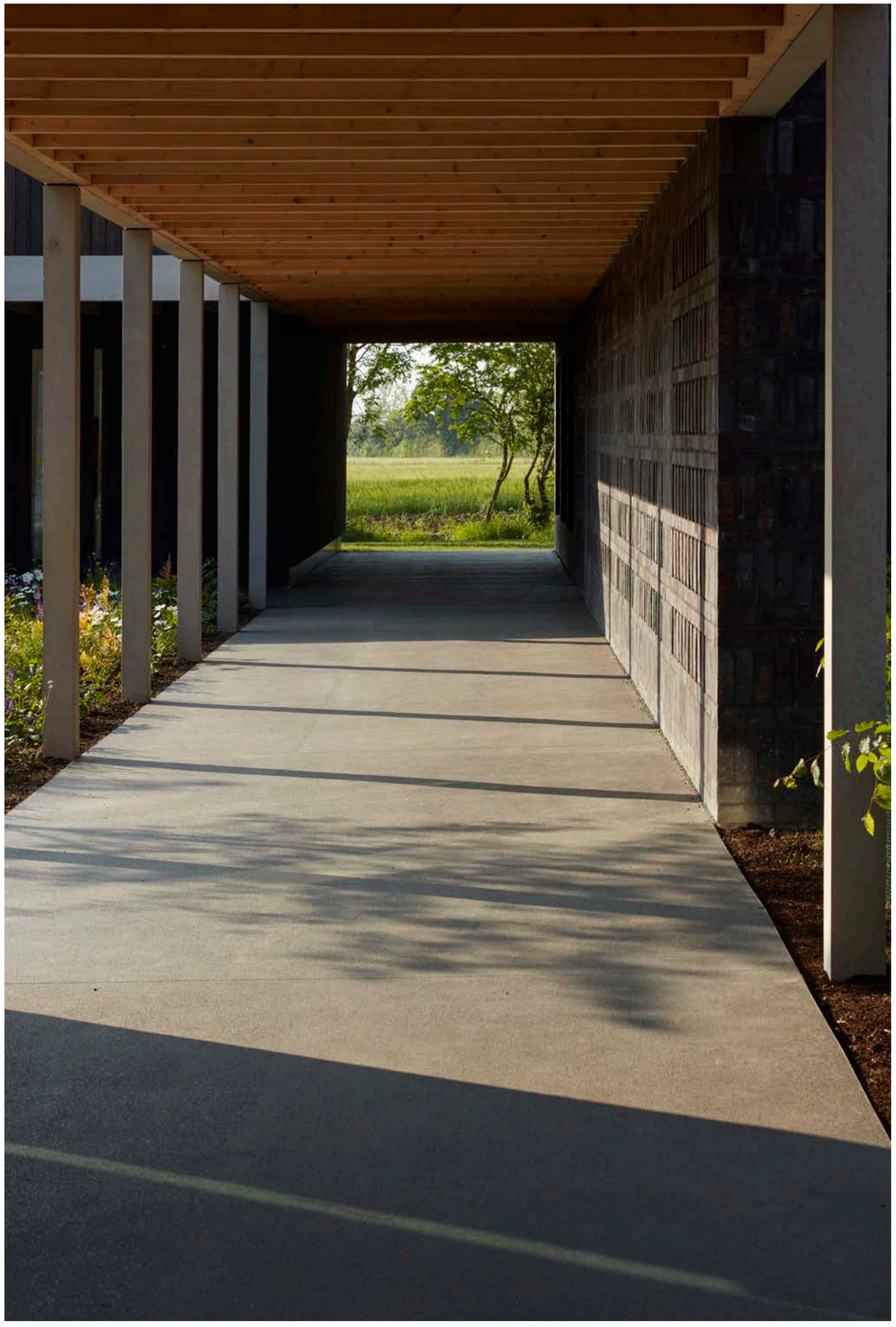
What is the bigger picture?
In 2020, 39% of architects in mid-sized RIBA chartered practices like ours were female,[11] and the Architects' Journal reported that women in architecture earned 16% less than men on average (across ten large companies that reported their pay gap).[12] In another 2020 Architects' Journal survey, 33% of respondents from a BAME background stated that racism was widespread in the architectural profession.

What are we doing?
Cindy and Michál were winners of the AJ's inaugural Women in Architecture Awards in 2012, and associate Hannah Anderson was shortlisted in the 2021 awards. The practice was shortlisted in two categories of WAN's Female Frontier Awards in 2021.

2.4 Charity/pro-bono work

What is the bigger picture?
Kate Raworth's global analysis of 'social foundation' indicators showed that 15% of the global adult population are illiterate, 17% of children aged 12-15 are out of school and 39% live in countries with a life expectancy at birth of less than 70 years.[13] As specialists in education and wellbeing we can contribute towards improving these problems through pro bono work.

What are we doing?
In 2020 we completed the design of a mobile clinic for the Kenyan mental health charity Kamili, which is now receiving patients. Michál is a trustee for the Portsmouth Naval Base Property Trust and Cindy is a governor for Regent High School and chair of the Architecture Foundation.



3.0 Endnotes

1 Kate Raworth, *Doughnut Economics* (London: Random House Business, 2017)

2 "Headline statements from summary for policymakers", IPCC, accessed April 5 2021, https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Headline-statements.pdf

3 "A Corporate Accounting and Reporting Standard", GHG Protocol, accessed April 5 2021, https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf

4 Mike Berners Lee, *How Bad Are Bananas: the carbon footprint of everything,* 2nd ed. (London: Profile Books, 2020), 186-187

5 "How green is your energy tariff?", Sarah Ingrams, accessed April 5 2021, https://www.which.co.uk/news/2019/09/how-green-is-your-energy-tariff/

6 "Securing London's Water Future: the Mayor's Water Strategy", Greater London Authority, accessed April 5 2021, https://www.london.gov.uk/sites/default/files/gla_migrate_files_destination/water-strategy-oct11.pdf

7 UK Parliament POSTnote: "Systemic risks arising from escalating biodiversity loss", published 29 April 2021 and accessed 07 March 2022, https://post.parliament.uk/systemic-risks-arising-from-escalating-biodiversity-loss/#:~:text=At%20the%202%20million%20lower,projected%20to%20be%20occurring%20annually.&text=The%20loss%20of%20species%20can,related%20to%20crops%20and%20livestock

8 "Sixth National Report to the United Nations Convention on Biological Diversity: United Kingdom of Great Britain and Northern Ireland", JNCC, accessed April 5 2021, https://data.jncc.gov.uk/data/527ff89f-5f6b-4e06-bde6-b823e0ddcb9a/UK-CBD-Overview-UKAssessmentsofProgress-AichiTargets-web.pdf

9 "Marine plastic pollution" accessed 07 March 2022, https://www.iucn.org/resources/issues-briefs/marine-plastic-pollution#:~:text=At%20least%2014%20million%20tons,causes%20severe%20injuries%20and%20death

10 "About the scheme", National Cup Recycling Scheme, accessed April 5 2021, https://www.cuprecyclingscheme.co.uk/about-the-scheme

11 "RIBA Business Benchmarking 2021: Summary Report prepared for the RIBA by The Fees Bureau", RIBA, accessed February 28 2022, https://www.architecture.com/knowledge-and-resources/resources-landing-page/riba-business-benchmarking-reports

12 "Racism in the profession is getting worse, AJ survey indicates", Richard Waite, accessed April 6 2021. https://www.architectsjournal.co.uk/news/racism-in-the-profession-is-getting-worse-aj-survey-indicates

13 Raworth, *Doughnut Economics,* 296

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