

Sustainability Report

2021-2022



CUNDALL

When our founding Partners set up our Practice in 1976, they did so with a clear vision; to be a values-driven business in which staff were empowered to contribute their ideas to build a culture of excellence.



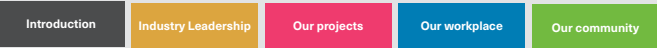
Successive generations of Partners have remained true to that vision and, to this day, our core purpose remains unchanged. Cundall exists to create the best opportunities for our people, and sustainable solutions for the planet. In the period covered by this report, COVID19 and COP26 highlighted just how important it is for businesses to be socially and environmentally responsible. In times of crisis, it would be easy for businesses to neglect their sustainability agendas as they focus on short-term decision making. However, many of the crises we face are linked to environmental and social challenges. It's therefore time for businesses to put sustainability at the heart of their business strategies, as a non-negotiable priority, in good times and bad. By doing this, external challenges can become a catalyst for innovation and improvement, and not a barrier.

At Cundall, our route to net zero is clearly articulated as part of our core business strategy, and we continue to look for ways to integrate ESG fully across all our operations. We are currently reviewing and updating our sustainability strategy, to ensure that it addresses the things that really matter to our stakeholders, as well as the evolving environmental and social landscape. This review will also inform which sustainability frameworks we will align with as we move beyond One Planet Living endorsement.

In line with the vision set out by our founding Partners, we want all our people to be involved in this journey; from our employee affinity networks, to volunteering opportunities, to our "SusTeams", to our ongoing programme of CPD, everyone in the business can learn more about sustainability, get involved, and have an impact. This report, covering our financial year to July 2022, reflects on the challenges we have encountered and the goals we have yet to reach but, importantly, also celebrates our successes, and serves as a "thank you" to everyone who has contributed to them.

Carole O'Neil
Managing Partner

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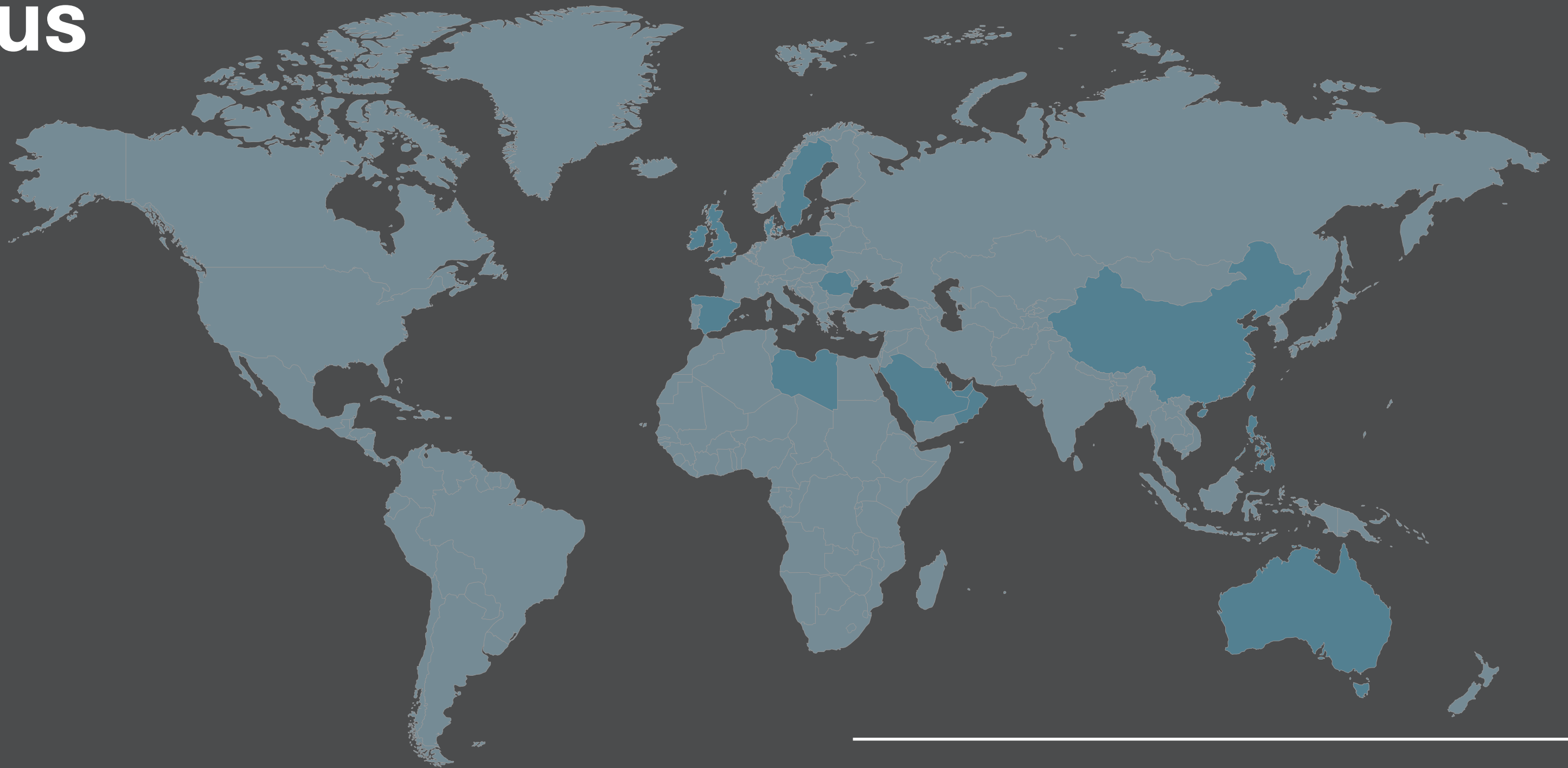


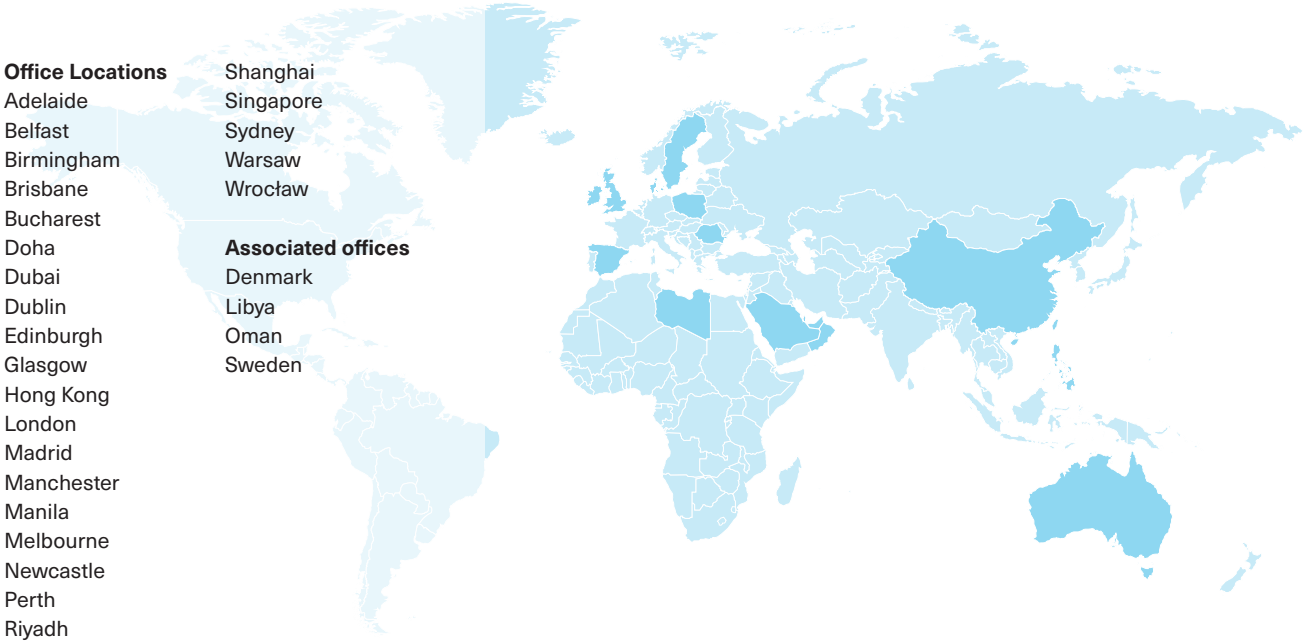
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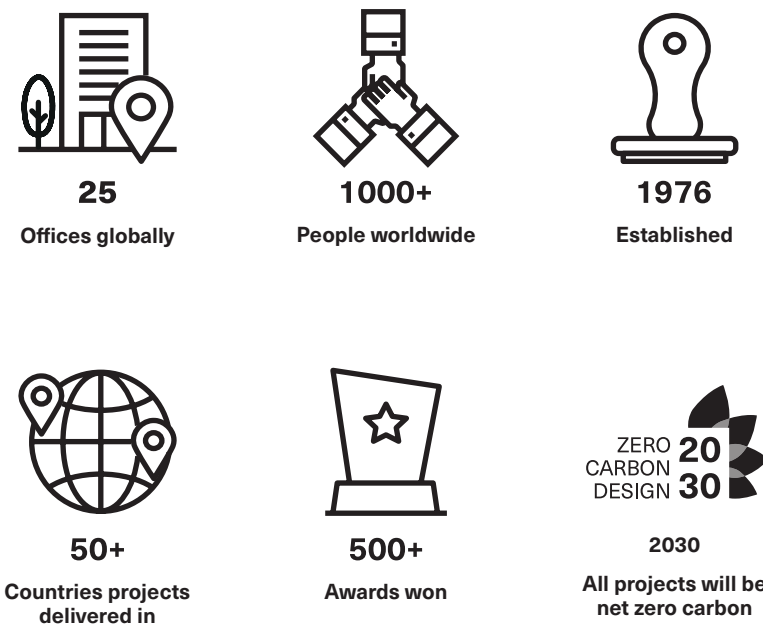
Cover image: Treehouse, Hong Kong Award-winning Net Zero Carbon climate-adapted, biophilic workplace concept in Hong Kong featuring engineered timber to reduce embodied carbon.

About us





Positioned at the forefront of sustainability in the built environment, Cundall provides professional services from business level strategy and governance through to building performance and design.



We are a multi-disciplinary practice operating as a single team across all our global offices. We create fantastic built environments and positively impact our communities, as well as provide great opportunities for our people. Every project is Partner or Director-led to provide senior ownership across its lifespan. We believe all projects offer a chance to bring meaningful change to the industry, and in addition to sustainable design we are leading the way in health and wellbeing and digital engineering. We are proud to be at the centre of pioneering design on some of the most exciting projects in the world. Business as usual is no longer enough – we can't wait to work with you.

We are continually engaged in self-evaluation to measure and manage our impact on, and contribution to, both industry and planet.



Our sustainability roadmap

Our vision

Our philosophy hasn't changed, and we hold true to the ethos espoused by the founding partners in 1976.



AGENTS OF CHANGE FOR A SUSTAINABLE WORLD
THE BEST PLACE FOR TALENT TO GROW AND FLOURISH
CONSTRUCTION INDUSTRY THOUGHT-LEADERS
EVERYONE'S FAVOURITE CONSULTANTS.



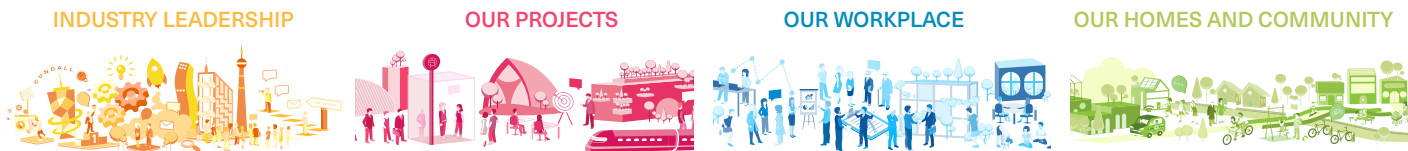
Our values

In striving to deliver this vision, we hold true to the values that have always underpinned our success.



Cornerstones

Our environmental and social impacts apply across the four key areas of influence of our business - our sustainability cornerstones.



Sustainability priorities

Following a detailed materiality review of our business in 2017, we have identified six sustainability priorities to focus on.



Award wins



Merit Award
by the Hong Kong Green Building Council



Sustainable Consultancy of the Year
by the Middle East Consultant Awards 2021



Green Consultant of the Year
by the MENA Green Building Council Awards 2021



CSR Initiative of the Year *(Driving Diversity & Inclusion)*
by the MEP Middle East Awards 2022



Sustainable Organisation of the Year
by Construction Technology Awards 2022



Sustainable Initiative of the Year *(NZC2030)*
by the Construction Week Awards 2022



National Awards 2021
for Mathuran Marianayagam by CitySwitch



Healthy Spaces Project of the Year
(PWC Middle East) by the MENA Green Building Council Awards 2022



Sustainability Project of the Year *(Hospitality & Tourism)*
The Storm Coaster
by the Middle East Consultant Awards 2022



Engineering Consultant of the Year
Building Awards 2021 and 2022

Key achievements



We have signed the UAE Climate Responsible Companies Pledge



We have contributed to 106 hours to pro bono work



We have invested nearly 5,350 hours of training and workshop for Zero Carbon Design 2030



We have expanded our sustainability teams by 38% globally



We launched our new website including the "Ideas" section, with 126 articles and 16 publications about sustainability



We have launched the SusTeam Awards, receiving in total 34 entries among 10 offices



Since launching our Zero Carbon Design 2030 (ZCD2030) project, 91 people have joined the initiative as advocates

July 2021- July 2022



Industry Leadership



COP26 was an opportunity for the world to come together to review progress and agree on measures to achieve targets set in the Paris Agreement to limit global warming to ‘well below 2°C and preferably 1.5°C’.

In November 2021, COP26 took place in Glasgow. The conference hosted its first ever Cities, Regions & Built Environment Day, bringing together construction industry professionals from across the globe to discuss how we can best achieve our net zero carbon ambitions by 2050.

01-12 NOV 2021
GLASGOW

COP26

IN PARTNERSHIP WITH ITALY



What were the overall outcomes of COP26?



Emissions reduction
Improved 2030 targets in line with Paris Agreement goal to 1.5 degrees



Fossil fuels elimination
"Accelerate efforts towards the phase down of unabated coal power"
"Accelerate the phase out of inefficient fossil fuel subsidies"



Financial support
Channel \$100 billion a year to less wealthy nations

How did we contribute to COP26?



1. Panel discussion “Construction: The Built Environment”

Sarah Linnell co-chaired the Construction Leadership Council's panel discussion, “Construction: The Built Environment”.

The event took place in front of a live audience of 350 people in the COP26 Green Zone, and was also broadcast live to thousands more around the world via the official COP26 YouTube. Cundall hosted watch parties in many of our offices to support Sarah.



COP26 BUILT ENVIRONMENT VIRTUAL PAVILION

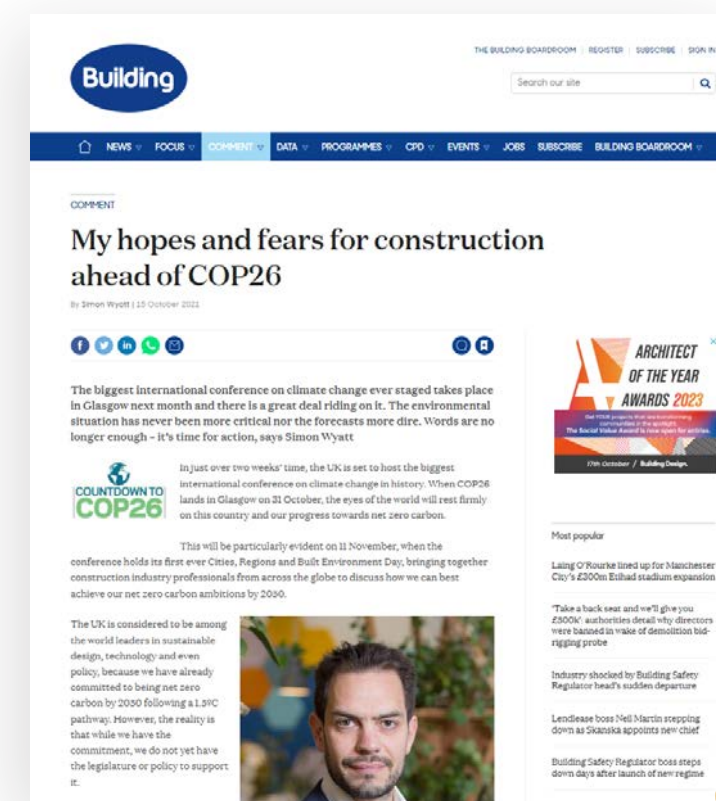
2. World Green Building Council Virtual Pavilion

Cundall was a commercial partner for the World Green Building Council's Virtual Pavilion and Build Better Now Exhibition, a 360-degree virtual exhibition featuring inspiring built environment projects from around the world.

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3. Sustainability in education

Sophie Simpson joined the roundtable on sustainability in education from the Foundation for Education Development. This discussion was centred around output specification on net zero carbon for schools and how to deliver new build schemes as cost effectively as possible, and how modern methods of construction can facilitate this.



4. Building magazine articles

Our Sustainability Partner Simon Wyatt wrote a monthly opinion piece in Building magazine covering the key issue facing the industry leading up to the conference.



Knowledge sharing – Our partnerships and networks



What is it?

Originally 'The London Energy Transformation Initiative', LETI was established in 2017 to support the transition of the London's built environment to meet Net Zero Carbon.

How did we contribute from July 2021 to July 2022?

We supported the development of the LETI-CIBSE Net Zero FAQs. The definitions and FAQs cover whole life, embodied – referring to total emissions and removals associated with an asset throughout the whole life cycle of an asset; upfront carbon – referring to emissions associated with materials and construction processes up to practical completion; operational energy; and operational water.



What is it?

It is a multi-disciplinary network of committed organisations believing in a better built environment and collective action to address the climate crisis.

How did we contribute from July 2021 to July 2022?

We have 7 team members working on the development of the UK Net Zero Carbon Buildings Standard. The UK Net Zero Carbon Buildings Standard is an industry-led initiative to develop an approach for verifying net zero carbon buildings. This is jointly being run by industry bodies BBP, BRE, Carbon Trust, CIBSE, IStructE, LETI, RIBA, RICS and UKGBC. The goal is to develop new construction and design standards, as well as in-use performance verification. The final publication of the standard is expected early 2023.

In addition to this standard, we were also involved in the *Net Zero Cost Evaluation Study: High-rise residential and office* and Delivering Net Zero Key Considerations for commercial retrofits.



What is it?

The Chartered Institution of Building Services Engineers is the professional body that exists to support the Science, Art and Practice of building services engineering.

How did we contribute from July 2021 to July 2022?

- Part of the authoring and peer review groups, we participated to the following publications:*
- TM65.1 Embodied carbon in building services: residential heating (2021)
 - TM65 Australia and New Zealand Embodied carbon in building services: a methodology for ANZ
 - TM65LA Embodied carbon in building services: Using the TM65 methodology outside the UK
 - TM68 Monitoring indoor environmental quality
 - TM69 Dynamic thermal modelling of basic blinds

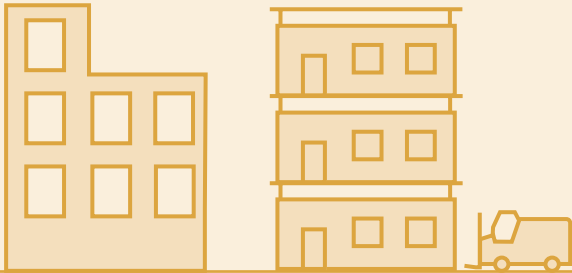


What is it?

The Whole Life Carbon Network (WLCN) is a network of architects, academics, engineers, contractors, local authority members, and other professionals from across Europe who wish to promote consistent and robust whole life carbon assessment and reporting within the built environment.

How did we contribute from July 2021 to July 2022?

We fed information into the publication of Carbon Definitions for the Built Environment, Buildings and Infrastructure.



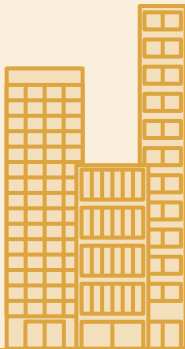
What is it?

The British Council for Offices' (BCO) mission is to research, develop and communicate best practice in all aspects of the office sector. It delivers this by providing a forum for the discussion and debate of relevant issues.

How did we contribute from July 2021 to July 2022?

We contributed to the guide to specification key design criteria update 2022: A Position Paper.

We are also involved in the creation to the 2023 guide to fit out in the sustainability and MEP sections which will be published soon.

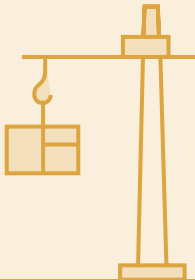


What is it?

RICS, the Royal Institution of Chartered Surveyors, is the world's leading professional body for qualifications and standards in land, property, infrastructure and construction.

How did we contribute from July 2021 to July 2022?

6 of our team members are currently working on the update of the Whole life carbon assessment for the built environment.



In January 2022 Cundall launched a new campaign, highlighting the different elements of sustainability and encouraging the industry to take immediate sustainable action.



We can feel lonely when working in sustainability, but through leadership and collaboration, with internal and external ESG advisors, we can overcome these challenges.

Ibrahim Al-Zu'bi, Chief Sustainability Officer at Majid Al Futtaim



As many people did want to come back into the office, we used WELL, the health & wellbeing certification to reassure that the office was a safe environment to return.

Sarah French, Head of Real Estate and Office Services at PwC

Mario Saab, Head of Sustainability MENA interviewed industry leaders, shedding light on how industry titans are approaching sustainability and net zero targets, aligned with UAE Vision 2050.



To reach net zero, we need to collaborate with all industries as they all have their own carbon footprint to reduce.

Mario Saab, Head of Sustainability MENA at Cundall

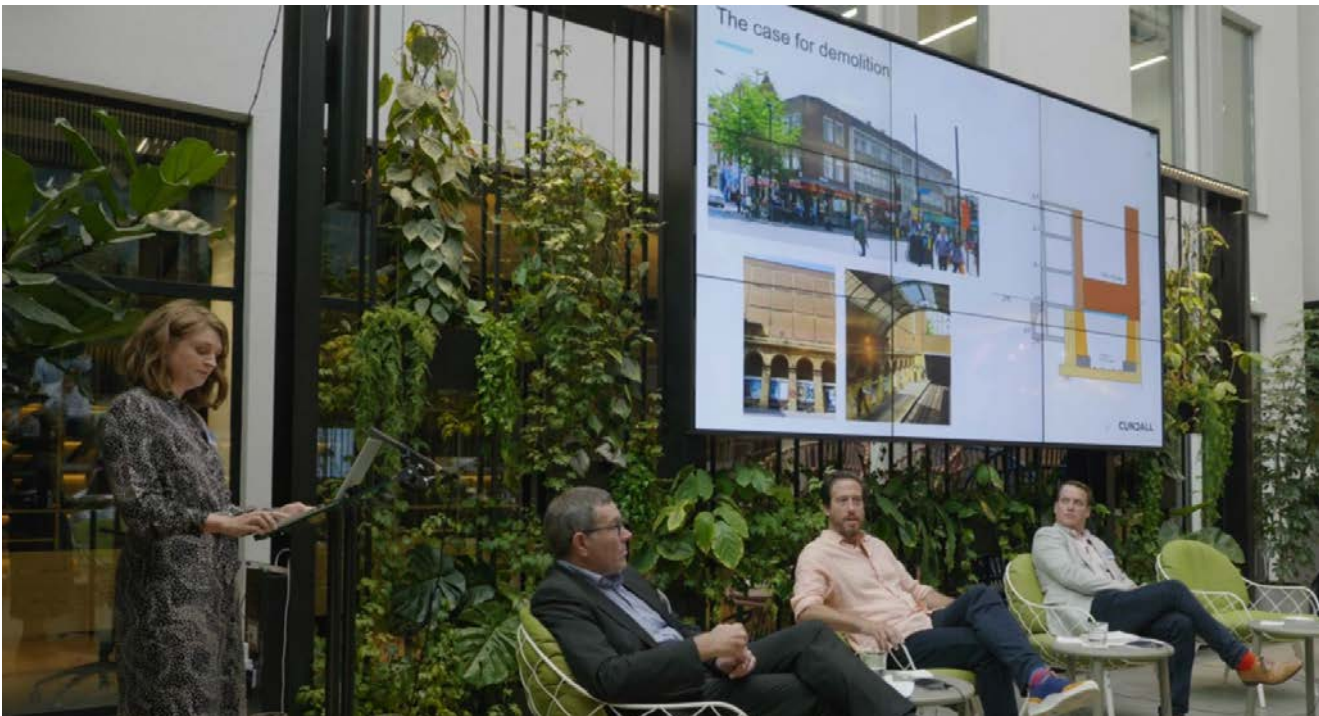


The three reasons why proliferation of renewable energy is accelerating all the time: environmentally sustainability, economically viability and energy security.

Niall Hannigan, Chief Financial Officer at Masdar



To celebrate World Green Building Week 2022 Cundall offices around the world held both in-person and online events to gather local insights on one big problem – how we address existing buildings and bring them on the net zero carbon journey.



“We need to see more and more retrofits so that these properties stay ahead in terms of decarbonisation and maintain their value, in order to keep attracting tier 1 and tier 2 tenants from a commercial and from a residential point of view.”

Mario Saab, head of sustainability MENA, Cundall

2
WORLD GREEN
2BUILDING
2WEEK 12 - 26 SEPT

Most recurrent challenges for existing buildings

These buildings use fossil fuel directly through the use of gas and heating oil

Energy-efficiency and passive thermal performance is poor

Occupant comfort may be low

These existing buildings will start to lose stature in the market by 2030 and become unlettable stranded assets

The spaces within the buildings poorly adapted for the digital age and flexible, adaptive occupancy patterns

For design engineers and architects, the opportunity to reinvent ageing or lacklustre buildings is an exciting one. It inspires creativity and ingenuity because there is no off-the-shelf solution.

Clients, designers and delivery teams all need to work together to understand the opportunities and achieve the best outcomes. The needs of building users – tenants – must be central to decision-making, and financial models need to factor in both risk and reward.

Doing nothing is not an option – achieving everything that is possible will be a journey undertaken one step at a time.

WGBW In numbers

600+ attendees

3,250+ video views

11+ global events

Knowledge sharing – Our Cundall website

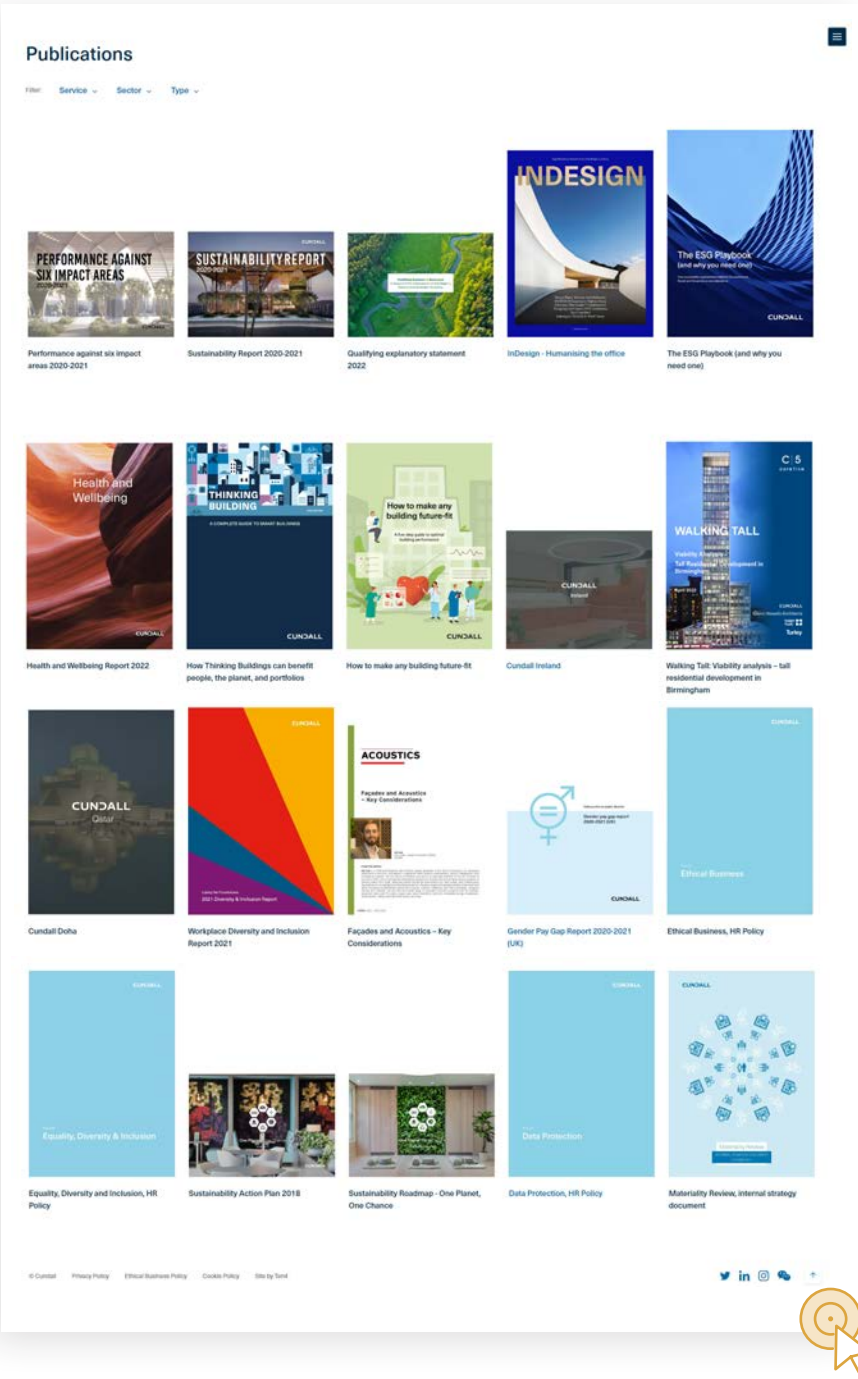
Thought leadership is a key element of our business and our people are empowered to share their knowledge and expertise for the benefit of our entire industry.

We believe that knowledge sharing is a critical agent in addressing climate change. For that reason, we have included the main take-aways from three documents...

Throughout this reporting period 2021/22, we have published insightful publications.

Sustainability is about collaboration and sharing knowledge.

Collaborating with other organisations gives you a far greater impact than what you can do alone, and diversity of perspectives is a powerful way to develop new solutions. When such collaboration is well-orchestrated, its potential to address systemic challenges can be remarkable.



Rob Marney presenting to students in Brixton

The ESG (Environmental, Social and Governance Playbook) is a practical guide to the fundamental principles of ESG and how they can be addressed in any organisation. It lays out the business case for acting on major risks including the loss of social licence, asset stranding and regulatory pressures.



Are you embarking into your sustainability journey? First undertake these 6 steps

1

Review
Look at what you have/what you are doing already. For climate change, understand your footprint and your climate risks

2

Materiality review
Find out what is important to your organisation but also to your stakeholders. That can be employees, tenants, clients, local community etc

3

Decide what to focus on first
Choose two or three key areas that have the highest priority

4

Develop KPIs, clear targets, timelines and action

5

Implementation

6

Tracking and reporting

Authored by Cundall ESG Advisory lead (APAC), Madlen Jannaschk, the ESG Playbook also explores the features of successful ESG approaches and how they benefit a business. It draws on real-world case studies, expert reports and maps out the trends being seen in finance, insurance, policy and consumer preferences.



“This ESG playbook is a practical and essential guide for leaders of any organisation that invests in, delivers or manages built environment assets and services.”
—
Madlen Jannaschk, Principal Sustainability Consultant



A COMPLETE GUIDE TO SMART BUILDINGS

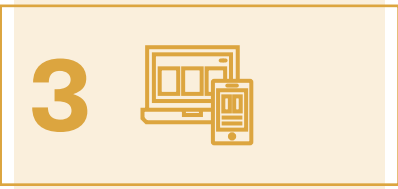
There is a lot of buzz about ‘smart buildings’ and ‘smart cities’ and even smart states and nations. But with so much hype, it can be challenging to understand what it all means for the average person, and the average building. Our new guidebook, The Thinking Building, goes behind the catchphrases to explore and explain the pathways for any building to ‘smarten up’ its performance and improve the occupant experience.

The evolution of a building into full technology-enabled capabilities is a staged process. What are the four main steps?



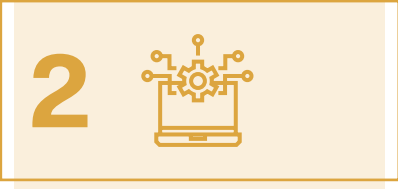
Smart ready
No matter what type of building, the first stage of making an asset smarter is undertaking a thorough audit of all the existing systems, including:

- heating, ventilation and air conditioning (HVAC)
- lighting
- water and gas metering
- building management system (BMS)
- energy management system (EMS)
- electrical power monitoring system (EPMS)
- vertical transportation
- fire protection
- security systems such as CCTV and access controls, and
- internet + communications (ICT) infrastructure.



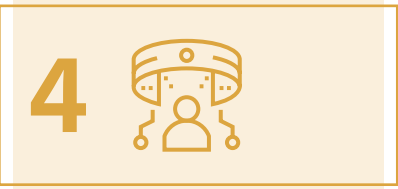
Smart Optimisation
Ultimately our built environment exists to provide places for people to live, work, shop, socialise, and heal. And the smart optimisation process puts the human experience at the centre of all assets.

It includes functionality that connects people to aspects of the building they engage with such as vertical transportation, amenities, hospitality, hot desking allocation, shared vehicle bookings, and security arrangements.



Smart Integration
At this point, every individual system becomes part of an interconnected, coordinated whole that provides real-time insight for the building manager, facility management (FM) team and others.

Each system is individually controllable from a central, digital building platform and/or dashboard, but also each element of building services can utilise automation to make building operations as seamless and efficient as possible.



Smart Future
The final stage of individual building smarts is ensuring they are future-ready for technologies that are already emerging such as quantum computing, artificial intelligence, cloud-control of assets, machine learning that supports operational feedback loops for continuous operational improvement, and full integration of building networks with wider networks such as smart transport networks, district microgrids, demand response, energy trading... and the technologies that have not yet seen the light of day. This makes it important to use open access protocols for building smart systems.

How to make any building future-fit

A five-step guide to optimal building performance



One of the crucial tasks for the net zero carbon transition is addressing the quality and performance of existing buildings. This can seem an insurmountable task from an expenses point of view – but the transition is a marathon, not a sprint. It is possible to map out a program of staged upgrades and improvements to a building that will not only reduce its emissions but also enhance the experience, comfort and wellbeing of occupants, add measurable market value and ensure the building is positioned to remain viable and valuable into the future.

“Whether you are an asset owner, facilities manager, building tenant or property fund manager, the Building Fitness Guide will help you make strategic, future-focused decisions that will ensure your buildings are in peak condition and ready for the net zero future.”

Mathuran Marianayagam, Principal Sustainability Consultant, Perth



OUR FIVE-STEP GUIDE TO GETTING YOUR BUILDING INTO SHAPE

- 1

How does the building currently perform?
Understanding the status of the building is the first – and most significant step – towards a building’s Health Check. If you can’t measure it, you can’t improve it. Simple.
- 2

Does the building owner or investment management have a sustainability strategy?
- 3

Is there a clear pathway to maximise building performance and achieve ESG goals?
- 4

Are your buildings resilient to climate risks – life, material and financial?
- 5

Is your ESG Strategy and Sustainability Roadmap up to date?

THE FIRST STEP IN ABOUT COLLECTING DATA, BUT WHAT SHOULD YOU MEASURE?

- 

Energy and water performance, carbon and greenhouse gas emissions, waste generation and recycling
- 

Indoor air quality, occupant comfort, health & well-being and productivity
- 

Ease of active commuting options, climate change resilience and pandemic responsiveness

“This document makes a very useful tool for conversations with clients when proposing smart strategies including building controls, sensors, and automation as part of embedding sustainability and making progress towards Net Zero asset operations”

Annie Nguyen Associate Cundall, Singapore and Michelle Ganley Principal Controls Engineer Cundall, Australia



Sustainnovation is a physical and digital exhibition of some of the most sustainable and innovative solutions coming onto the market at the moment. The physical exhibition was launched in July 2022 and displayed in the Edinburgh office over summer. The digital exhibition can be visited on the Cundall website.

Click through the pictures adjacent to explore the products we have chosen to highlight.



K-BRIQ®

The circular economy - but brick-shaped. Kenoteq are pioneers in the circular economy, with their K-Briq being made from over 90% local recycled construction and demolition waste.

MYCELIUM INSULATION

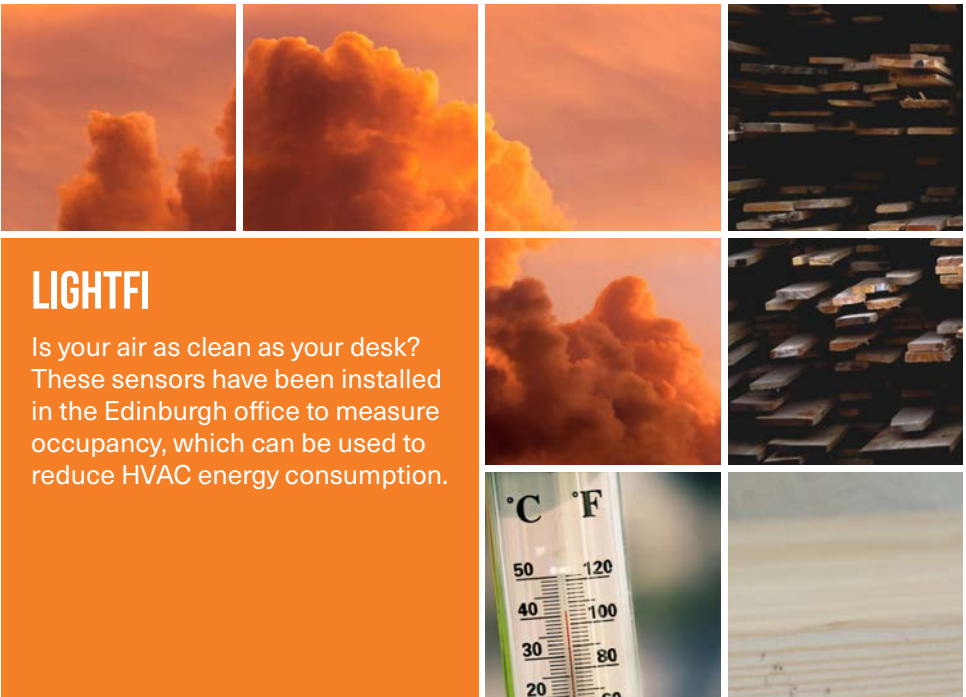
How can mushrooms keep you warm? Mycelium not only outperforms petrochemical/plastic-based construction materials in thermal and acoustic insulation but, as a natural material, it is also safer and healthier.

NOKU CANVAS

Made from 100% recycled plastics, natural cork and recycled car headlights, these hexagonal units allow you to make a green wall in your own home. It gives people who live in urban environments and who don't have access to gardens, an opportunity to build their own mini forest while saving.

OBSCURE LAMPSHADES

Made of organic refuse biocompound (Orb), this collection of handmade lampshades are 100% natural, cold-compostable and remanufacturable. They demonstrate an intelligent, material-driven, circular and zero-waste approach to design.



LIGHTFI

Is your air as clean as your desk? These sensors have been installed in the Edinburgh office to measure occupancy, which can be used to reduce HVAC energy consumption.



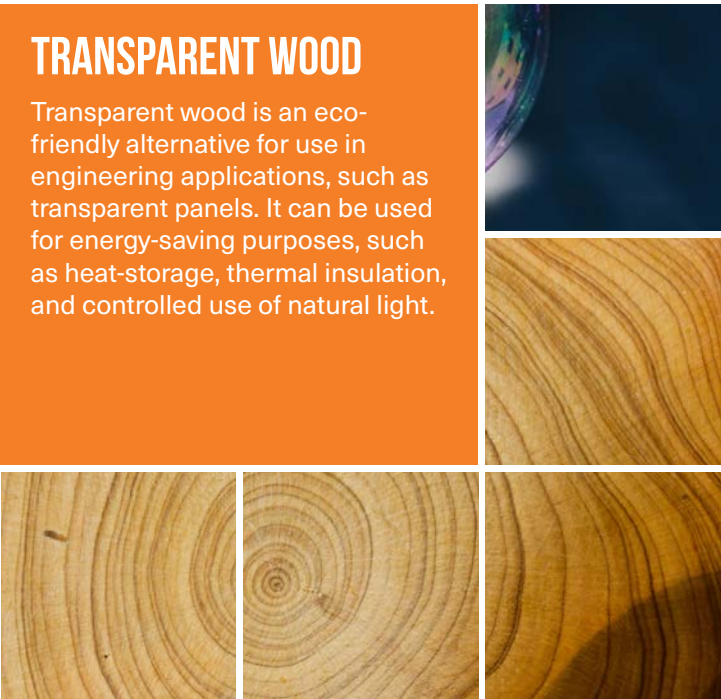
CROSS-LAMINATED TIMBER (CLT)

CLT involves gluing timber boards in layers with each layer rotating at a 90 degree angle to the one below. This creates a material that can outmatch concrete or steel in both structural performance and embodied carbon levels.



DOWEL-LAMINATED TIMBER (DLT)

DLT is a simple and sustainable timber panel construction method, in which softwood timber baulks are secured by hardwood dowels with a lower moisture content.



TRANSPARENT WOOD

Transparent wood is an eco-friendly alternative for use in engineering applications, such as transparent panels. It can be used for energy-saving purposes, such as heat-storage, thermal insulation, and controlled use of natural light.



FOREST BATHE?
THE NOKU CANVAS BY SHIRINOKU
Made from 100% recycled plastics, natural cork and recycled car headlights, these hexagonal green walls give you your own home forest.

It gives people who live in urban environments, that don't have access to gardens, an opportunity to build their own mini forest which saves space and comes complete with a self-watering system.



TA VONNIAT
YATZUON RUO 30 ZANTAN
ET
501

SIMON COURT
EDINBURGH
FACED
LUMINOUS

FLA's development of Simon Court is a traditional Scottish tenement designed and built in a contemporary way.

Both using healthy, sustainably sourced timber and a low-carbon concrete, Simon Court is a prime example of how timber can be used in a modern, sustainable way. The building is a testament to the power of timber in construction, and a model for the future of sustainable building.

CAN TIMBER CONSTRUCTION IMPROVE HEALTH?

Our projects



Cundall is on a journey to zero carbon. We achieved carbon neutrality certified by Carbon Trust since 2018 as a business globally, and we have set ourselves a new, even more ambitious goal - by 2030 every project we design will be zero carbon.

Our Net Carbon Design 2030 project



91

Advocates

Present in each office, advocates are vital in ensuring facilitating conversations in their teams and helping to build team plans



52

Plans

We're encouraging our teams to come up with their own plans for achieving zero carbon pathways for their projects.



10

Core Team Members

They lead, support, monitor and inspire the business to deliver on identified plans.



4

Milestones

We've hit some major milestones on our journey to achieving zero carbon. The first milestone we achieved was implementing a project pathway for all projects.



1

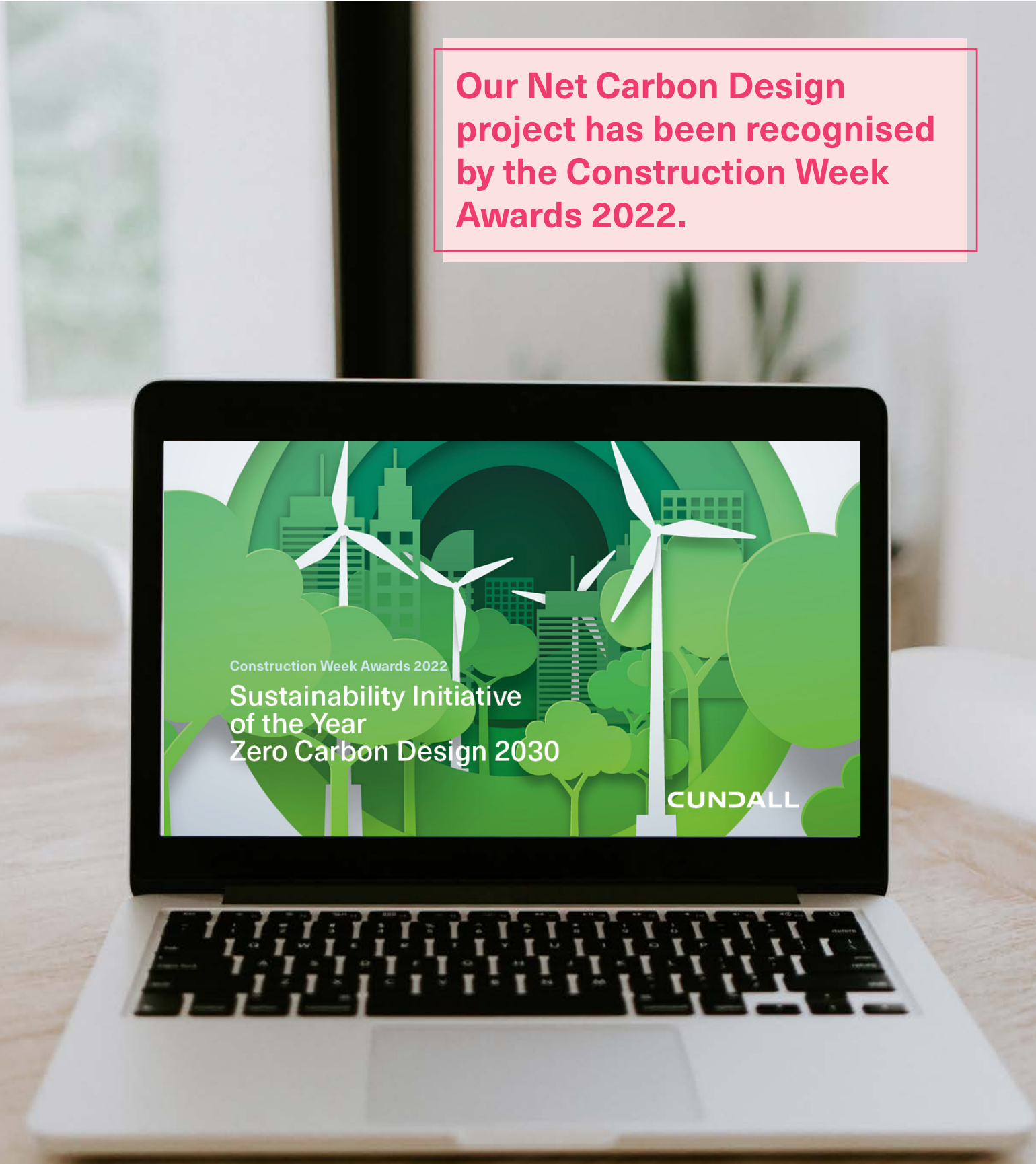
Overall goal

Our ultimate goal is to make sure that every project we design is zero carbon by 2030.

Our Net Carbon Design 2030 project has been recognised by the Construction Week Awards 2022 in winning the 'Sustainable Initiative of the Year'. The judges were "impressed with the active steps that Cundall has taken to drive sustainability within its organisation while commending this company's commitment to work on design projects that are zero carbon.

The table below sets out the key steps to delivering a zero carbon building, with suggested targets to set the level of ambition and monitor progress at each step. Additionally it identifies key actions to address at each step and who in the project team typically has primary responsibility for these. From increased collaboration between teams to definitions of zero carbon and the new net zero toolbox, everything we do brings us closer to creating projects that are

Our Net Carbon Design project has been recognised by the Construction Week Awards 2022.



net zero in design, construction and operation. Over the past few months, every single person in Cundall has been given the opportunity to engage and help set a plan for their team. The Melbourne sustainability team have led the charge, showing enthusiasm and commitment by submitting their plan well before the deadline.

Cundall steps to zero carbon



Define targets

Define emissions for energy use and upfront embodied carbon prior to zero carbon strategy.



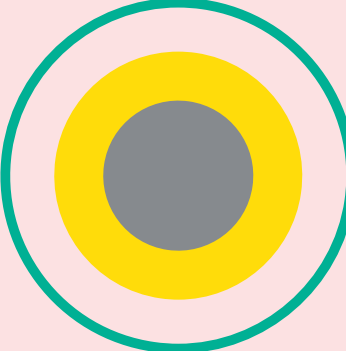
Fossil fuel free

Eliminate natural gas infrastructure. Aim to eliminate other fossil fuel sources as soon as possible.



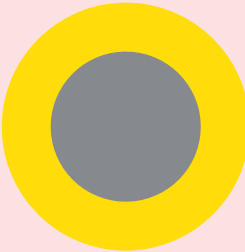
Reduce energy use

Significantly reduce all building energy consumption through passive design, demand reduction, energy efficiency and effective controls.



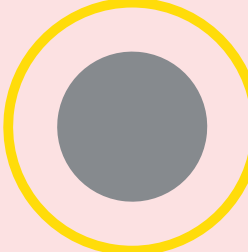
Power by renewables

Aim to provide all electricity from 100% renewable sources – on-site and/or off-site.



Lower upfront embodied carbon

Significantly reduce embodied carbon through design, construction activities and material/product selection.



Reduce other GHG emissions

Aim to eliminate or reduce other GHG emission sources within the carbon footprint.



Offset residual emissions

Procure nature based carbon offsets for all remaining GHG emissions, in construction and in operation.



Emergency (backup) power, refrigerants waste, transport, consumables, building refurbishments/upgrades/fit-outs.



Ventilation, cooling, lighting, pumps, small power, lifts, security, controls, IT systems.



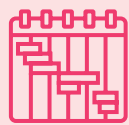
Emissions from products and materials used in construction and construction activities.



Space heating, domestic hot water and cooking.

We launched the Zero Carbon Toolbox this year. We always knew that achieving Zero Carbon Design 2030 would require training and education. These documents are extracts from David Clark's 2013 'What Colour is Your Building' book.

Our Zero Carbon Toolbox



ZCD2030 Sustainable projects



How to book time for Zero Carbon Design 2030



How to achieve zero carbon



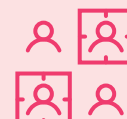
Tools Tracker



How to talk about Zero Carbon Design 2030



Tools proposal form



Zero Carbon Design Team Plans



Project Pathway

“

It is within our power as consulting engineers to show our clients that they can make sustainable decisions that don't necessarily cost the earth."

Abdalla Ghoneim,
Engineer, Dubai



“

By empowering our people to identify their own learning needs, it has given them the space to spend more time reflecting on their plans to achieve zero carbon on their projects and really assess what they need instead of us creating a one size fits all solution."

Louise Worth, Learning & Development Manager, Newcastle



Our project highlights



Palm House Royal Botanic Gardens, Kew, UK

The Palm House project provides a full net zero carbon refurbishment of the Grade I listed Palm House and Grade II listed Waterlily House, both of which sit within a UNESCO World Heritage site. The project will support Kew's Sustainability Strategy and their desire to become Climate Positive by 2030.



Reach climate positive by 2030

- Constraints
- Heritage of the buildings
 - Poor thermal performance of glass buildings
 - Conditions demanded by the plants

Reconnect humanity and nature



Treehouse, Hong Kong

The Treehouse concept is an eco-conscious integrated system that aims to reconnect humanity and nature. Cundall provided multi-disciplinary consultancy on building services, structural engineering, sustainability, smart building, information technology, and lighting design. Engineering excellence integrates and harmonises the architectural features, human needs, local environment, and future education.



Key design features

Passive design optimisation

- 'Energy screens' which trap radiant heat at night
- Insulation where possible
- Glazing bars

Energy demand reduction

- Heat management
- Entrance management
- Water consumption

Fossil fuels elimination

- On-site renewable energy: Air source heat pumps, ground source heat pumps, wind turbines, biomass heating, PV
- Off-site renewable energy

Key design features

Health and wellbeing

- Biophilic environment
- E-tokens to reward sustainable behaviour
- Circadian lighting

Net zero carbon operations approach

- Concentration hub
- Sky garden
- Granular thermal zoning
- Sky common area with yoga classes
- Self-shading facades
- Rooftop PV system
- Wind catcher for natural cooling
- BIPV-CLAD solar chimney
- Decentralized free-cooling system



Create an experiential destination workplace where staff could unite and connect

PwC Middle East, Dubai

Cundall was appointed for multi-discipline engineering services for PwC’s 16,000m² office in Emaar Square, Dubai. The project is the largest and most adventurous of its kind across the region as well as for the brand. Our team provided design and construction supervision for the fit-out of the office’s seven floors, client and executive areas and training space under the theme “office of the future”.

Key design features



- Health and wellbeing
- Wellness suite
 - Platinum WELL certified



- Human centric
- PwC Academy
 - Top floor experience centre and events space

Delivers social value



Common Ground, Perth, Australia

Common Ground Perth is a housing development for homeless persons in Perth that will provide 112 apartments and spaces for co-located support services. Unhoused people often have complex needs, and that providing a safe, secure home and then ensuring the wraparound services are provided to help people regain control over their lives and address any specific health needs including mental health.

Key design features



- Social housing management
- Developed for persons who have been homeless or are at risk
 - Wrap-around services to support residents
 - Easy access to amenities and public transport



- Aboriginal needs management
- Heat management
 - Entrance management
 - Water consumption

Our project highlights



St Edward's School, Oxford, UK

As the UK's first certified Passivhaus Plus SEND school, the building is carbon positive in operation with an EPC rating of A+. With a payback period of just 6 years, this showcases that through technical excellence it is possible to deliver a building that will serve the needs of its occupants well into the future whilst respecting the past.

Recognising historic past

Green Star and Fitwel certified



631 Springvale Road, Melbourne, Australia

As part of Salta Properties sustainability-focused Nexus Business Estate, 631 Springvale Road is a first-class, five level office building designed for a net zero future. Cundall provided holistic advisory to ensure the project team could achieve Green Star and Fitwel certification requirements through an integrated, human-centred approach incorporating active design, inclusivity features and net zero-ready building systems.

Key design features



Passive design optimisation

- New thermal bridge software tool developed



Net zero carbon operations approach

- High performance triple glazing
- Design through a cascade approach to ventilation
- Off-site construction for insulation and airtightness
- Integrated heat pump within the air handling unit
- Significantly reduced energy bills within 6 years

Key design features



Health and wellbeing

- Awarded 1 Star Fitwel certification
- Stairwell with active design strategies
- Lactation room
- Bicycle parking and bike repair facility
- Outdoor landscaped terrace with BBQ area
- Multi-purpose sporting court on rooftop



Net zero carbon operations approach

- Awarded 5 Star Green Star
- All-electric building services
- 95 kW PV solar array on the roof
- 3-pipe Variable Refrigerant Flow (VRF) air conditioning system
- Electric storage hot water units
- 15% of basement car parking spaces are EV-ready

Our workplace



We practice what we preach. We aim to create the most productive and rewarding working environment possible. Our workplace culture is rooted in wellness, equity, diversity and inclusion.

Ethics & equity
Cundall are working hard to take a proactive lead on building a diverse and inclusive industry, starting from within. We offer here at Cundall, a workplace culture that offers dignity and respect to all, that encourages the sharing of ideas and perspectives, and that values difference. Since publishing our first global diversity and inclusion strategy in January 2020, a lot has changed at Cundall, and much for the better. Over the last 12 months, we have implemented a variety of initiatives aimed at making Cundall the most inclusive consultancy in our industry.



Cundall office, Dubai

Affinity networks



Mosaic is Cundall's Ethnicity & Culture network and provides a forum for people of minority and underrepresented ethnicities and cultures to connect and share experiences and ideas. The network is influential in promoting ethnic diversity, representation and inclusion at Cundall. It aims to facilitate discussion among colleagues around the business who are of a minority or underrepresented ethnicity or culture, to celebrate cultural diversity, and to eradicate workplace inequalities.

The network is inclusive, and as such welcomes participation from any colleagues (regardless of ethnicity) who would like to learn about and support diversity and inclusion on the basis of ethnicity and culture.
Network Chair; Victoria Olawoyin.

What did we do from July 2021 to July 2022?

Ramadan resources
We published an article to support our colleagues during the most sacred month in Islamic culture. Supporting colleagues during Ramadan is part of building a workplace where everyone is respected and valued. Some co-workers might have additional religious commitments throughout this month, and it is important to create awareness around them.

Black history month
We organised two lunchtime screenings with "Black and British: A Forgotten History" and "Small Axe". We had the chance to host a conversation with the inspiring Professor David Olusoga. We were able to discuss concepts such as white privilege, structural inequality and the importance of black history. David's meticulous and evidence-based approach, coupled with his phenomenal storytelling skills had us all captivated – it was an unforgettable experience, one which has given many of us the chance for some much needed introspection.

What are our plans for 2022-2023?

The next Black History Month will include quizzes, Afro-Caribbean cuisine and lunchtime screenings. Mosaic also aim to release a Lunar New Year event.



“We need to recognize that the internal cultures that we create within organizations can intentionally or unintentionally disadvantage and also damage people from different cultures.”
—
Professor David Olusoga



GAIN is Cundall’s Gender, Affinity and Inclusion Network. GAIN provides a supportive network for women and gender minorities; and works to influence greater gender diversity, representation, and inclusion across the practice. The GAIN network aims to facilitate discussion among colleagues around the practice who are of a minority or underrepresented gender, to raise awareness of gender inequality, and to further gender equality at Cundall. The network is inclusive, and as such welcomes participation from men as allies who wish to play an active role in challenging gender inequality in our business and our industry.

- UK Chair Gemma Christian
- APAC Chair Lucia Donlon
- MENA Chair Olga Litkovets



What did we do from July 2021 to July 2022?

International Woman in Engineering Day (INWED) event Jun 2022

GAIN hosted an afternoon tea event for over 50 women in the construction industry. Senior Cundall women invited other women in their networks and asked each one to bring a junior woman to help build the networks of the more junior staff. Afternoon tea was chosen as a more inclusive event as it does not focus on alcohol, and a time during typical working hours is often easier to combine with caring responsibilities.

Menopause at work

On World Menopause Day, we thought we would try to bring the menopause a little more out into the open. We released an internal guidance and an external article World Menopause Day 2021 - Blog - Cundall. By talking openly about these questions, raising awareness both within and beyond Cundall,

and putting the right support in place, we hope we can get to a place where the menopause is considered normal and not a workplace issue at all.

Micro-aggression workshop March 2022

Gain was created in 2020. One of the first surveys assessed the topics of interest among 4 choices and microaggression appeared as main concern. Leyla Okhai, a coach, mediator, and inclusion practitioner delivered this online workshop. Throughout this conversation, we covered these questions:

- What do we mean by ‘microaggressions’?
- When and how might they occur at Cundall?
- What are the short- and longer-term impacts of microaggressions?

- How can we avoid or challenge microaggressions?
- This workshop was an eye-opening experience for many and allowed us to create safe place to speak up.

Safe Travel guidelines

GAIN became aware that many staff were not aware of the existing policy that allows staff to take a taxi home after a client or BD event, resulting in female staff making journeys they felt were unsafe. They worked to make sure that managers were providing this information to their staff in advance. They also developed safe travel guidelines for situations where female staff may be harassed or made to feel uncomfortable, to make it clear that safety is paramount.

What are our plans for 2022-2023?

Next year, we will work on several aspects, from inclusive promotion guidelines to free feminine hygiene supplies in the office. We will continue to educate managers about how menopause impacts employees. We intend to repeat the INWED event



“GAIN will keep focusing on individual actions leading to ripple effects for sustainable positive change”

Gemma Christian



Kaleidoscope is Cundall's LGBTQ+ network and is almost 3 years old! Kaleidoscope offers a dedicated forum for Cundall employees who identify within the LGBTQ+ umbrella to connect. Kaleidoscope also works to promote LGBTQ+ inclusion at Cundall.

Co-Chair Maciej Krezolek
Co-Chair Maria Knowles
Secretary Sasha Brewer
Executive Sponsor Belinda Morgan



PROUD Beer's LGBTQIPA

What did we do from July 2021 to July 2022?

Every year in the UK, February marks LGBTQ+ History Month, and this year to celebrate, Kaleidoscope created an informative campaign to raise awareness. Their campaign included:

- Pride stickers. By taking a sticker and displaying it at your home or on your car you can show others that you take pride in your LGBTQ+ community
- PROUD Beer's LGBTQIPA to the office fridges
- New books into the D&I library: Rebecca Strickson's Queerstory: An Infographic History of the Fight for LGBTQ+ Rights
- Lunchtime screenings of short LGBTQ+ films or documentaries

What are our plans for 2022-2023?

We plan to participate in the Pride event in different cities and invite external speakers for events.



Freehold 10th Anniversary Gala
An LGBTQ+ network for professionals in the real estate sector.



“By celebrating our differences and championing inclusivity through our LGBTQ+ network, we're not only shaping a vibrant, diverse workplace but also fueling the sustainable growth and unity that defines our company's future success.”

Maciej Krezolek

Other initiatives

Alongside our affinity networks, we have also implemented a range of important initiatives.

Looking beyond International Women's Day (IWD)
To mark IWD this year, we've spoken to people from around the practice about the role they play in breaking down biases and stereotypes; and how we as a business and individuals can help move the industry forward together. [Time to #BreaktheBias: International Women's Day - Blog - Cundall.com.](#)

Stereotypes and biases shape perceptions, decision making, and employment outcomes. Even among those who consciously renounce prejudice, biases persist as a product of our inevitable exposure to stereotypes, early and often – and not just around gender. These stereotypes and biases become “habits of mind” requiring conscious and sustained effort to break. This sustained effort is necessary on both individual and systemic levels if organisations are to bring about greater equality of outcomes for their employees.

What do we need to do as an industry to break the bias?



“From my experience in the industry, ignorance is bliss. I think there are those who genuinely do not understand it enough to believe it (or who are in denial), and this causes the continuous bias cycle to continue. The way to break the bias is to be part of every discussion and it not feeling like a subject we cannot acknowledge. This, coupled with education and it being an inherent part of our processes, will create the consciousness and eventually will lead to understanding and then action.”
Lee French, Partner, Operations Director MENA (Dubai)

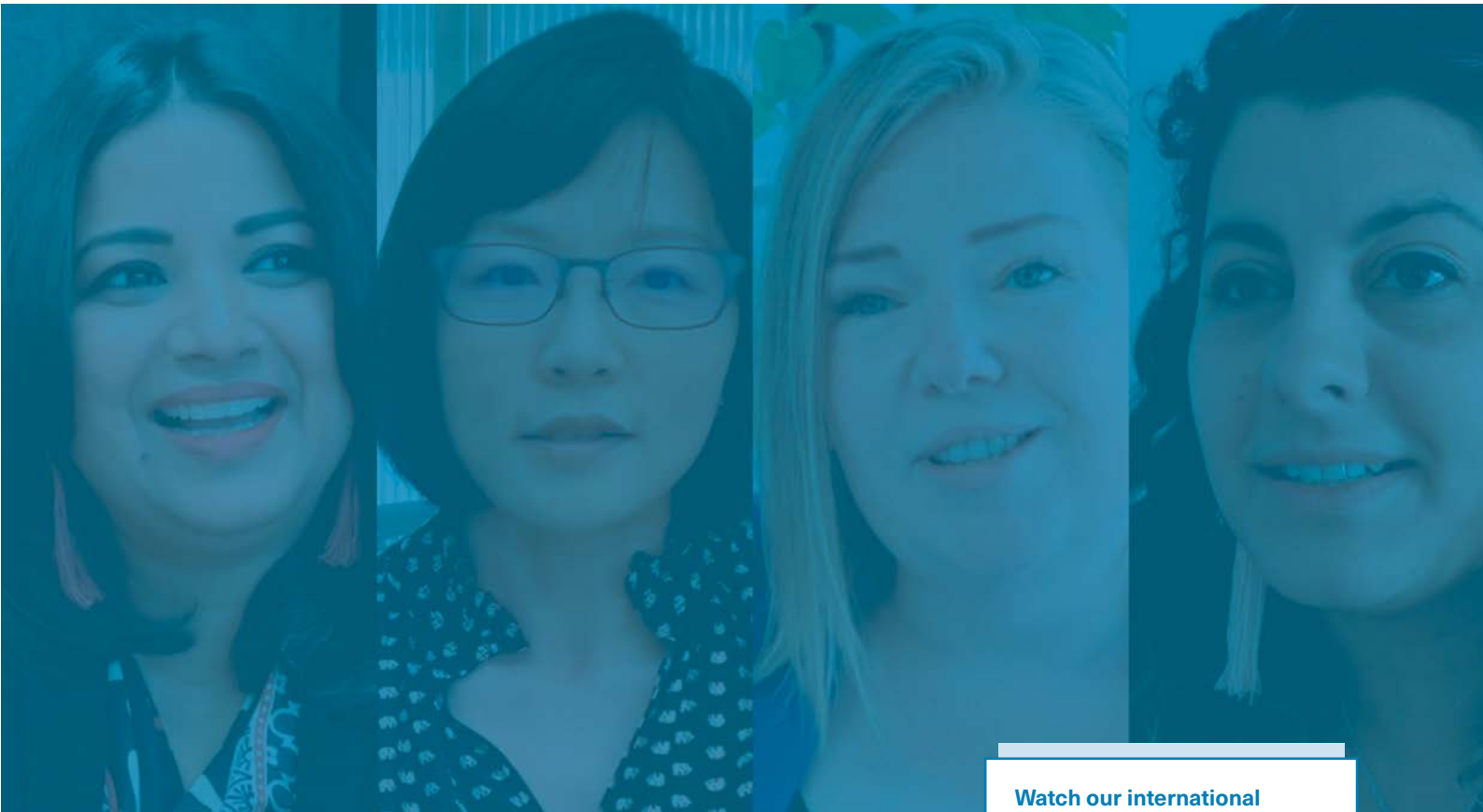


“There are a few actions everyone can take to encourage women to join the industry and more importantly remain in the industry.

- Ensure family flexibility is accepted and practiced (both for men and women)
- Ensure negative behaviour isn't ignored
- Provide equal opportunity on projects to ensure adequate experience is offered to all
- Increase awareness of engineering fields and job opportunities
- Early exposure to science and maths.”

Celine Cannam, Principal Engineer (Sydney)

International Women in Engineering Day (INWED)
In celebration of 2022's International Women in Engineering Day, we spoke to four of our inspirational engineers from across the globe. Each engineer shared insights into some of the projects they are most proud of and why they chose to pursue a career in engineering.



Watch our international women in engineering day video [here](#)



“I would say that passion and curiosity are key. Passion gives a person the power to go a long way in this career and curiosity helps an engineer to develop and continue to learn new technology and skills in this field. Think about why you wanted to be an engineer and what you can do to make this world better.”
Chaoming Yu, Associate Director, Singapore

We work closely with local educators and industry bodies to raise awareness of careers in engineering and construction, as well as the specific work we do at Cundall. We pay particular attention to engaging with young people from underrepresented and low-socio economic communities.



Why is there so much focus on women in STEM?
STEM stands for science, technology, engineering and mathematics and refers to any subjects that fall under these four disciplines. STEM subjects, historically, have been very male-dominated, with young girls often discouraged from pursuing such a technical career path. While 12% of women in undergraduate programs will graduate with a STEM degree each year, only 3% go on to work in the STEM field. This lack of gender balance has also led to a pay gap between men and women in STEM, and a significant scarcity of talent for businesses such as ours.



Two of our Newcastle-based engineers paid a visit to a local school to talk to the children about the engineering profession and to answer all their questions.

“It was lovely to see so many excited faces while I was presenting, and the children enjoyed being able to ask questions about my job, trying on the PPE and telling me about their own engineering experiences. A lot of the children told me they now wanted to be engineers, which made the experience very worthwhile. I left with a big smile on my face!”
Undergraduate Engineer, Newcastle

We also work with institutions such as the Institute for Engineering and Technology to offer financial support to engineering students from low-income backgrounds. One such student who also obtained an industry placement with our Birmingham office said:

“The Engineering Horizon Bursary will allow me to focus on my studies rather than financial stress allowing me to reach my full potential. It also helps towards travelling for placement interviews as well as attending engineering events where I can share my experiences in engineering. Furthermore, I am able to pay for essentials such as books and stationery.”
Aspiring Electrical Engineer, Birmingham

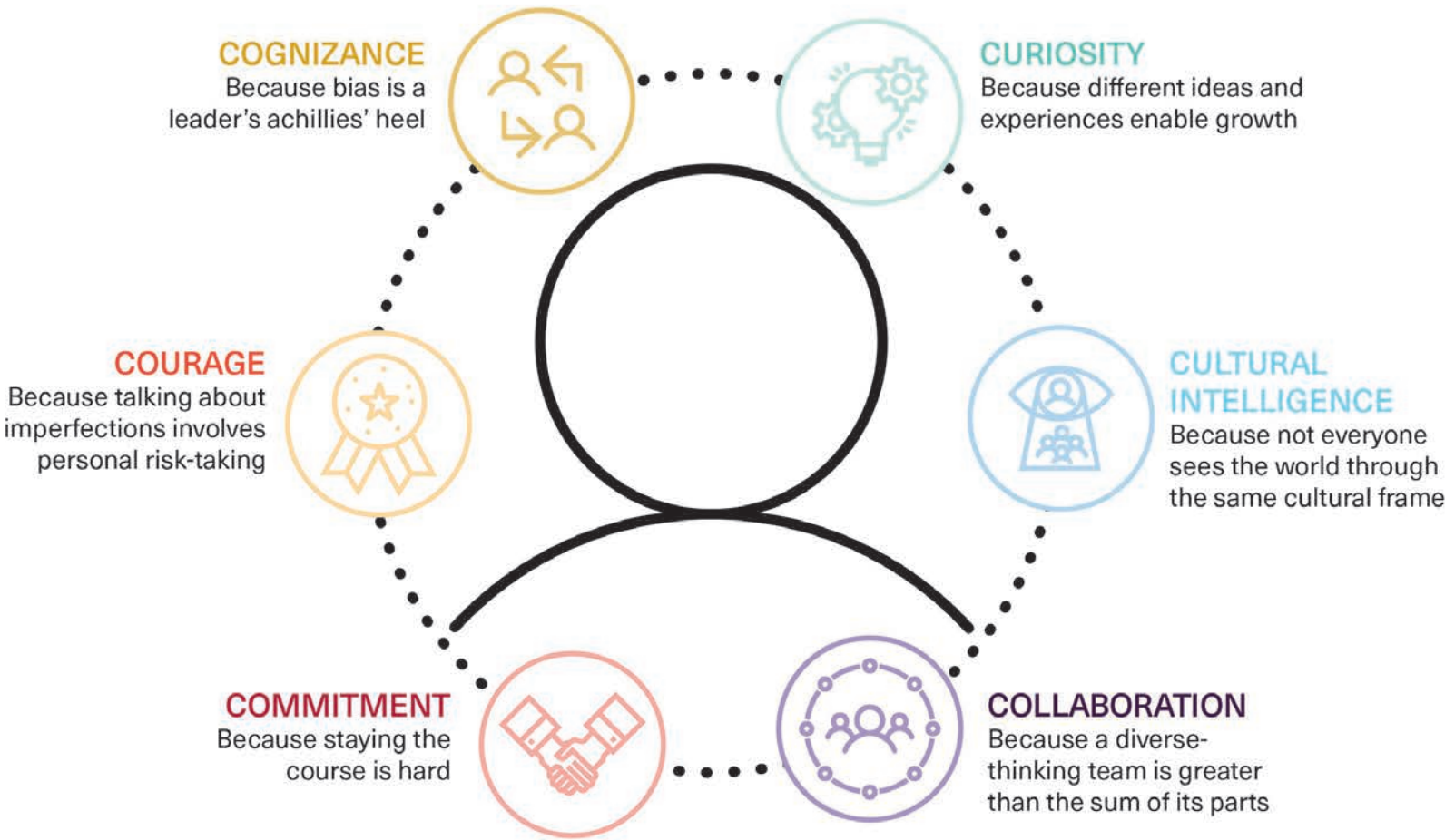
The following is typical of the enthusiastic outlook from the many colleagues across the practice who take time out of their day to share what they do with young people:

“I had a great time sharing with the students Cundall's approach to climate positive action. It was inspiring to see the interest they had in the building services industry and how sustainability can be implemented within engineering.”
Graduate Engineer, London

Building inclusive leadership

Inclusive leadership is critical to our future success as a practice. It drives innovation, enhances our access to the best talent in our industry, and creates greater connectivity between teams and offices. Inclusive leadership leads to a positive work culture, where people are valued, engaged, and productive.

This year, we completed our pilot inclusive leadership programme including 6 partners. John Amaechi’s “The Promises of Giants: How YOU can fill the leadership void” was used as a framework alongside a diverse range of learning materials and initiatives. Participants attended monthly discussion forums and workshops in which they discussed and reflected on their developing awareness of concepts and real-world challenges relating to driving an inclusive workplace culture.



Six traits of an inclusive leader

- Inclusive leadership is about:
- Treating individuals and groups equitably — that is, based on their unique characteristics, strengths, and preferences - rather than assumptions or stereotypes
 - Valuing individuals — that is, taking the time to listen to and understand different people and perspectives – and recognising the benefits of welcoming such difference
 - Widening participation and leveraging diverse perspectives to enable optimal decision making, while reducing the risk of groupthink

The program has resulted in a growing proportion of our leadership team becoming better equipped to discuss and respond to many of the urgent challenges faced by our business and our industry. Our leaders are tasked with learning about, discussing, and enacting leadership traits such as curiosity, humility, vulnerability, and courage. **This in turn has led to more meaningful, proactive, and visible participation in conversations (and action) relating to equality, diversity, and inclusion.**

What's next?

After the global inclusion survey circulated in 2019, we published a series of reports followed by our global diversity and inclusion strategy. A lot has happened since then, not least the monumental changes to our lives brought about directly or indirectly because of the global pandemic. Despite what has been a very challenging period, we have made positive progress against our diversity and inclusion goals. We have increased the proportion of women within leadership roles, and narrowed the gender pay gap. New employee networks have been launched dedicated to supporting inclusion based on gender, ethnicity, sexuality, and neurodiversity. We are having the challenging yet necessary conversations about workplace inequality, sexism, racism, meritocracy and privilege. For instance, we cannot afford for the recent positive progress on gender representation to lead to complacency.

Further work is needed to ensure that the trend towards greater balance at more senior levels does not just result in a new, slightly higher, "glass ceiling". Nor can the progress we are making on gender equality distract from the comparative lack of progress achieved on ethnic diversity. We recently launched a new affinity network to support our neurodiverse colleagues, and we will continuously adapt our practices to reflect a growing organisation comprised of people from a wide range of nationalities, cultures, and (dis)abilities. We will extend our outreach activities to engage more closely with young people from socio-economically disadvantaged backgrounds, and to initiate impactful changes to policy like our adoption of the Rooney Rule - to more proactively attract and retain great talent of all identities and backgrounds.

In generating a safe environment for challenging conversations to take place we are laying the foundations for the more difficult work to come – but we know there is much more to be done.



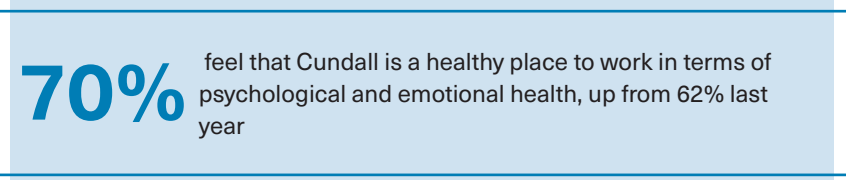
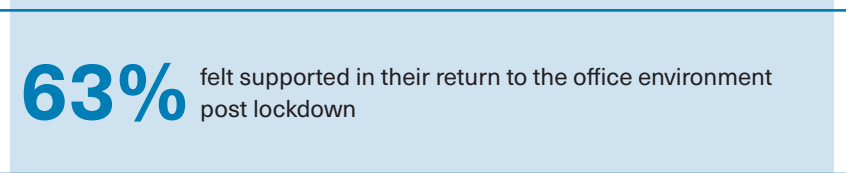
At Cundall, health and wellbeing are integral part of our priorities. We want to support every person through a varied range of activities resonating with their own experiences.

Mental health and wellbeing have taken on enhanced importance since COVID-19. Wellbeing more than ever is now an integral part. Employees are coming out of the pandemic with a different set of expectations of employment than they had going in. People are seeking organisations that create space for authenticity, caring, and support. At Cundall, we consider the point of view and expectations of our people through our annual H&W survey. For the third year, we investigated the physical, dietary and mental health, as well as potential stressors and needs.

This increase might be due to our several initiatives throughout the year. We have seen lots of great things happening around the business since our last sustainability report:

The U-First wellbeing workshops
These webinars aim to empower, upskill and support attendees to confidently improve their wellbeing. Resilience, movements, lifestyle management, gender and change are key topics which have been covered.

H&W Survey findings - Our success



The People Manager workshops
They were designed to help our people managers develop a deeper understanding of mental wellbeing and enable them to start a conversation about mental health, spot the signs of mental ill health and provide appropriate support.

Financial wellbeing webinars
With our partner Mercer Marsh Benefits, we hosted several webinars including: your attitude to money, getting on track for the future, saving & investing, sustainable investment, taxes and pension.

Local social activities
Throughout all our offices, we plan a lot of social activities allowing our people to connect in person.

Promotion of physical wellbeing
We include online resources from webinars to online yoga classes, but we also promote physical activity through football, walking, running, cycling, hiking.



Doha Iftar
Following two years of virtual Ramadan Iftars, the team celebrated Ramadan and a lavish Iftar buffet in person.



Dubai go hiking
The office came together for a hike in memory of their colleague Ricardo Ferreira. To remember Ricardo they have renamed one of the meeting rooms to the 'Ricardo Ferreira Meeting Room'.



West Coast Park bbq, Singapore
After over two years of COVID restrictions disallowing any office organised social events, the team finally managed a BBQ at West Coast Park.



London 5km walk
In March, the team held a 5km walk and raised £1,200 for those in need in Ukraine.



Edinburgh football
There is a five-a-side football team playing Friday evenings. The team are currently second in their table!



Poland offices social
The teams from the Warsaw and Wroclaw office got together at Cafe Mozaika for some team bonding.



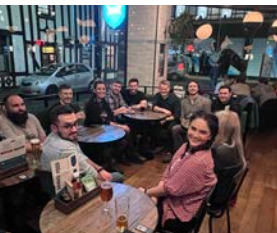
RunMageddon
Well done to everyone from the Warsaw and Wroclaw offices who took part in the RunMageddon in Warsaw. It was a mixture of really difficult and hard exercises in water and mud.



Shrove Tuesday perth
Pancakes warmed the Perth office on Shrove Tuesday. Creativity prevailed when Camilla produced some amazing pancakes with a sandwich press.



Our UK offices celebrated Queen Elizabeth's Platinum Jubilee in May.
We celebrated with sandwiches, cakes, pastries, drinks and some great decorations! It was a fantastic opportunity to catch up with colleagues while celebrating the Queen's 70 years of service.



Manchester curry night
In February the team enjoyed a spicy night out at a local curry house!

Cundallympics

The Cundallympic games were established at the time of the Rio Olympics in 2016 and the second Cundallympics ran at the same time as the Tokyo Olympics, from the 23rd July to the 6th August 2021.



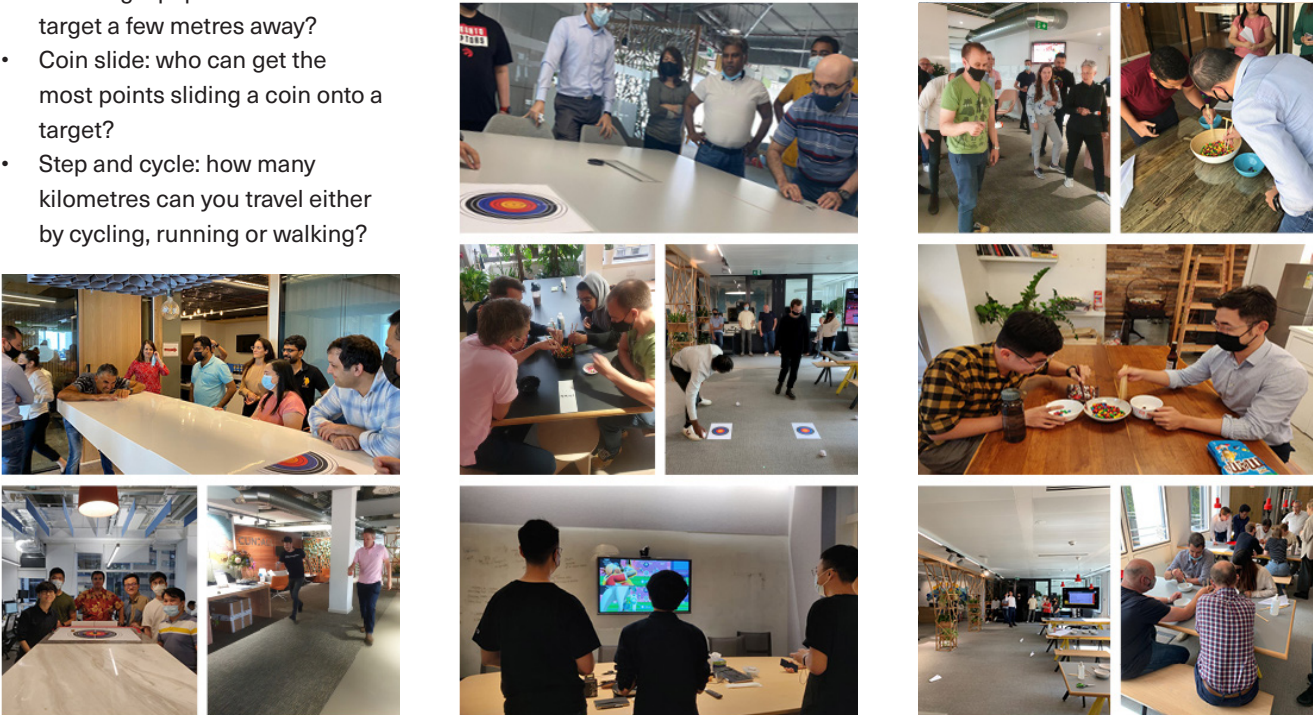
It was an incredible opportunity to get people together to have some fun and a little bit of competition within and between offices. This year we respected the local covid rules and restrictions.

Throughout this event, many challenges were organised:

- Chopstick skittle challenge: how many skittles can you remove from a bowl in 60 seconds with chopsticks?
- Aeroplane javelin: whose paper aeroplane will travel the furthest?
- Shotput competition: who can score the most points by throwing a paper ball onto a target a few metres away?
- Coin slide: who can get the most points sliding a coin onto a target?
- Step and cycle: how many kilometres can you travel either by cycling, running or walking?

In addition to these challenges, local initiatives took place such as the Cundallympic quiz, local fitness/wellness session and junk modelling. We saw a high number of teams competing in our quiz both in-person and virtually across many of our offices. Hopefully those of you that took part have an upgraded Olympic knowledge, and you have since been able to impress friends and family! The Doha office took things to the next level, adopting a points system and additional mini challenges to get people even more engaged. The grand finale event of the

Cundallympics office games saw the biggest turnout across all offices. A number of hidden talents were revealed including lightning-fast chopsticks skill and paper aeroplane throwing abilities.



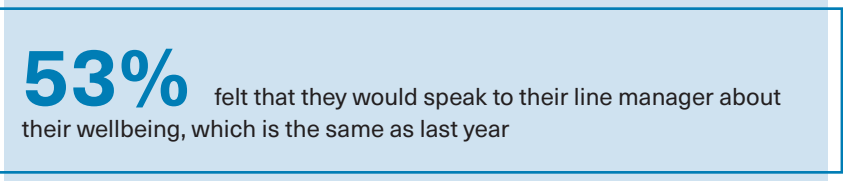
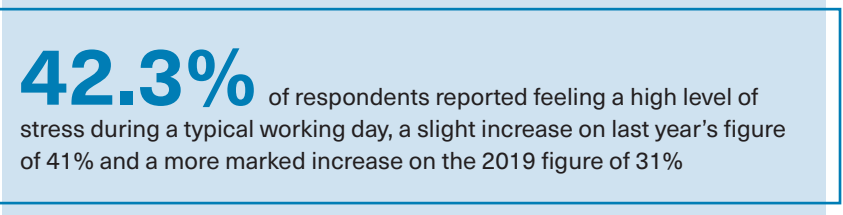
H&W Survey findings - what's next

It is encouraging to see the positive impact that our strategy is making. Our annual wellness survey gives us a better understanding of the physical and mental wellbeing of our people right now as well as the aspects of health and wellbeing are most valued.

These outcomes helped us identify some key actions that would ensure we provide great working environments:

- More realistic client deadlines would reduce the occurrence of workload peaks and requirement to work overtime. This in turn would reduce stress and anxiety and improve work/life balance
- Line managers should be encouraged to regularly and openly discuss stress and mental wellbeing with their team during their regular 1-2-1 meetings as a matter of course
- People would like to see more small group outdoor activities during/after the working day to help them connect with their colleagues and improve general wellbeing
- At Cundall, we value the feedback of our people, and our annual H&W survey is key in assessing our ongoing progress.

The survey revealed several key findings that highlighted specific areas for improvement



Learning & development is a key enabler for us to achieve our vision of being ‘agents of change for a sustainable world’. We provide opportunities for all of our employees to learn and develop current and new skills through our wide range of learning interventions.

Early careers

Our Graduate Training Programme runs for three years and has been designed to provide the best development experience to those involved.

- In the 2021/2022 financial year, 114 engineering graduates joined us across all our global offices. We are currently looking forward to welcoming another 50 or so graduates globally in September 2022.
- We also offered undergraduate placements to 19 university students across both technical and business support departments.
- We have 15 degree technical apprentices, with another five starting in our UK business in September 2022.
- This pipeline of young talent is the cornerstone of our recruitment strategy and our ‘grow your own’ approach.

CDPs

Our Learning & Development team deliver a wide range of technical courses throughout the year, ensuring our technical teams stay up to date with technological developments, market changes and awareness of colleagues’ efforts to develop in-house technical tools. So far in 2022, our L&D team have delivered/ scheduled 224 online training sessions, all of which can be counted towards attendees’ annual CPD points.

Cundall provides ongoing professional development opportunities for all staff, including access to our busy CPD calendar. Some of our recent CPDs have included:

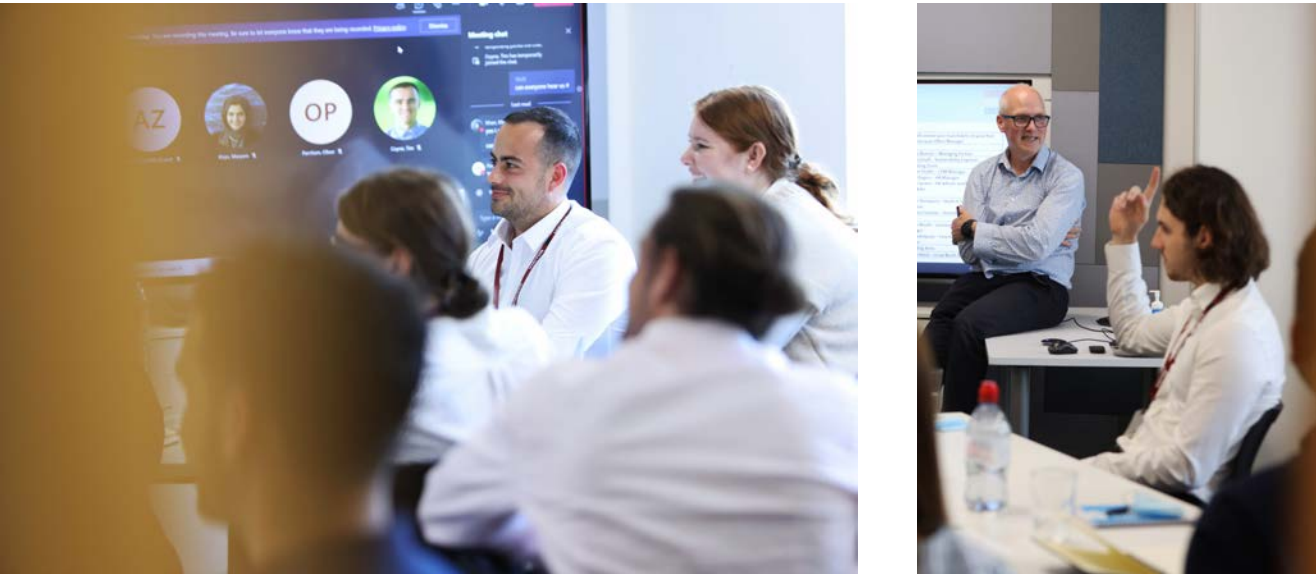
- The Implications of Net Zero for School Design
- Circular Economy in the Built Environment (Lighting Solutions)
- Several sessions covering the Changes to Part L (Domestic and Non-Domestic Energy Use), Part F (Ventilation) and Part O (Overheating)
- Embodied Carbon Grasshopper Tool

Knowledge sharing

Our teams host monthly knowledge sharing sessions to present their teams’ updates to the wider business.

There is an NZC feature in each talk, and our recent topics have included:

- Energy Usage in a NZC Office
- Guidance: CIBSE TM67 Electrification of Buildings for Net Zero
- Net Zero Carbon: CO₂ Heat Pumps for Domestic Hot Water
- Cundall’s Early stage Passivhaus Optimising Design Tool



Graduate day 2021



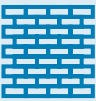
Cundall, Fourways House, Manchester

At Cundall, we prioritise materials and products that reduce natural resource consumption, have low embodied impact, are non-toxic and can be easily repurposed or recycled at end of life. **Cundall's new space at Fourways House has been transformational for their Manchester staff and business.**

The building and fit-out were selected and designed based upon a significant consultation exercise with the Cundall Manchester staff.



Key design features



Minimising material consumption

- Original materials reused from a historic building
- Desks, kitchen and other finishes were of the highest quality from sustainable materials
- New items purchased only for free-standing furniture to allow for adaptation and reuse



Carbon reduction

- No fossil fuels
- Natural ventilation
- Efficient lighting with daylight sensing
- Very Good BREEAM rating



Community

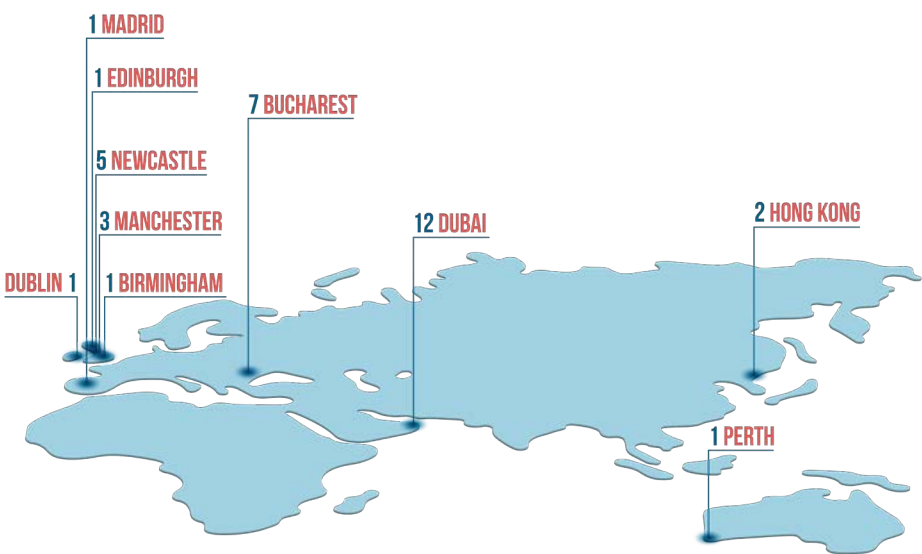
- Procurement from local businesses: catering, florist, artists
- Team collaboration areas: Fourways community, sustainability forum



Health and Wellbeing

- Collaboration and quiet spaces
- Active lifestyle promotion: bike storage, shower, changing facilities, sit-stand desks
- Biophilia
- Great acoustic performance

At Cundall, we believe that everyone can contribute to a better world and every small action has a positive impact.



The winning entries were:



Operational energy reduction,
BIRMINGHAM.

- The team have developed a strategy to reduce the energy consumption mixing natural air conditioning and access to the FCU controls.



Mental health and wellbeing,
MANCHESTER.

- The team arranged series of walks and hikes with multiple destinations and distances, during lunch breaks and weekends.



Sustainable procurement,
NEWCASTLE.

- The team has implemented a new coffee machine in the kitchen, purchasing the coffee beans from a local and fairtrade family business and the oat milk from 10 litre containers.



Waste minimisation,
PERTH.

- The team came together to understand the waste streams in the office, learn more about how to correctly dispose of each, and sources different bins to ensure maximum separation.



Community engagement and volunteering,
MANCHESTER.

- The SusTeam organised knowledge share sessions called "What Can We Learn From...", including diverse facts regarding different cultures.

The SusTeam, is an employee network running across 10 offices including people who are interested and involved in sustainability.

In 2022, we launched the new SusTeam strategy, including new structure, tools and initiatives. It focuses on empowerment, collaboration, and recognition. To celebrate the SusTeam efforts as well as stimulating healthy competition between the offices, the SusTeam Awards was created.

Jonnie Allen, Philippine Pieterwas and Ric Navarro received 34 entries to evaluate, falling into five categories.

Discovering the diversity, creativity and involvement of the submissions has inspired us to strengthen our commitment and recognition to the SusTeams. The most uplifting entries were the ones creating impact within our staff members, and within their families, friends and communities.



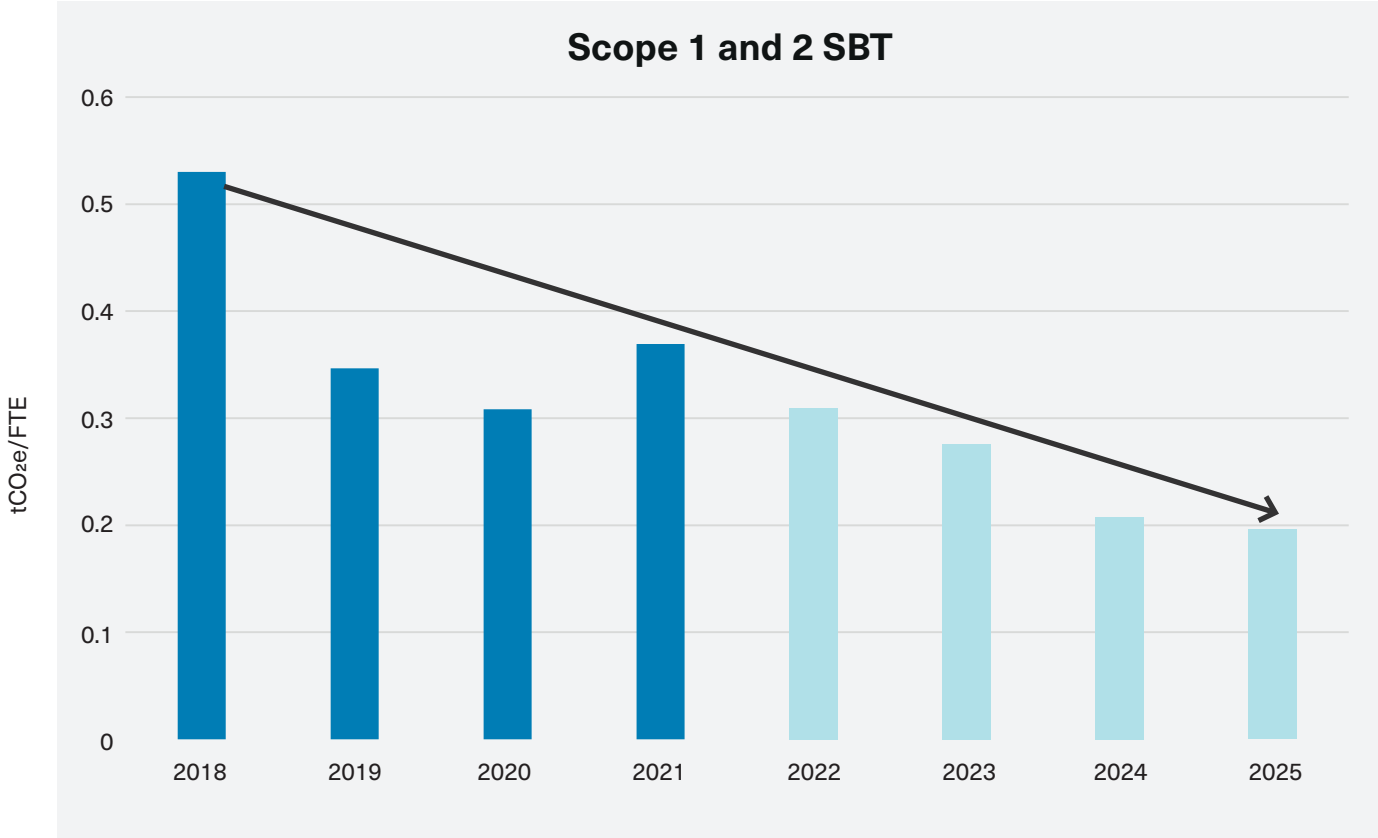
Our Science-Based Targets

As the global community strives to combat climate change, businesses play a crucial role in mitigating the adverse effects of greenhouse gas emissions. By committing to reaching net zero carbon, companies aim to reduce value chain emissions to align with the global or sector-level goal of reaching net zero emissions in eligible 1.5°C pathways by 2050 or sooner.

When Cundall launched its sustainability roadmap in 2018, setting the goal of becoming carbon positive by 2025 seemed evident. In parallel, we joined the Science Based Targets initiative (SBTi) by approving our targets across our three scopes aligned with well below 2 degrees.

Under the approved targets, we have committed to reducing our Scope 1 and 2 GHG emissions by 63% per Full-Time Equivalent Employee by 2025. With a baseline of 428tCO₂e in 2018 and 809 FTE, for this reporting period in 2021, we achieved a scope 1 and 2 emissions of 343 tCO₂e, resulting in 0.36tCO₂e/FTE. However, in order to achieve our target for 2025, we would need to reach 0.19tCO₂e/FTE. Renewable energy procurement, energy audits, energy efficiency measures and robust energy management systems would support us in achieving our goal.

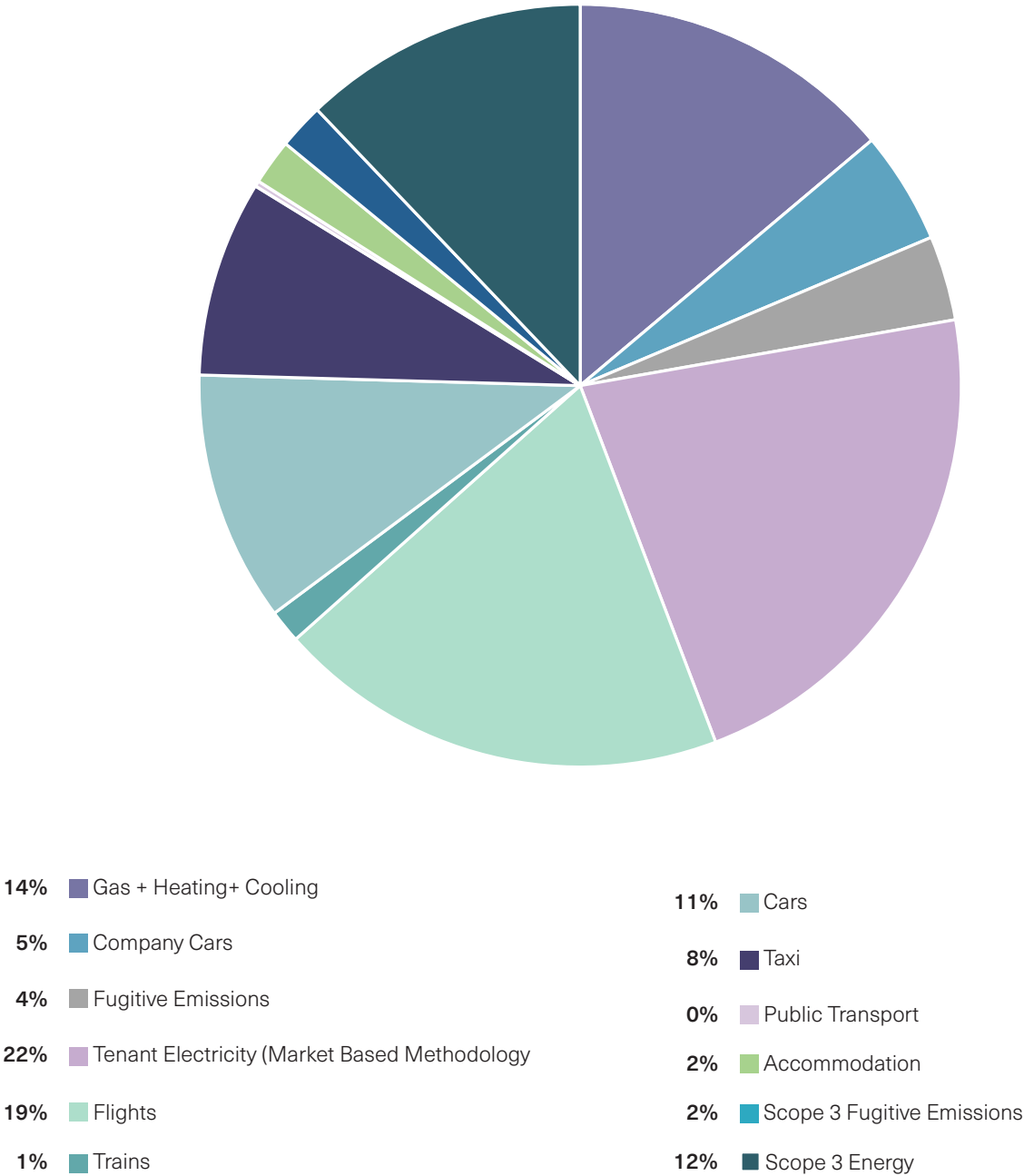
Scope 1 and 2 SBT



Zero carbon energy

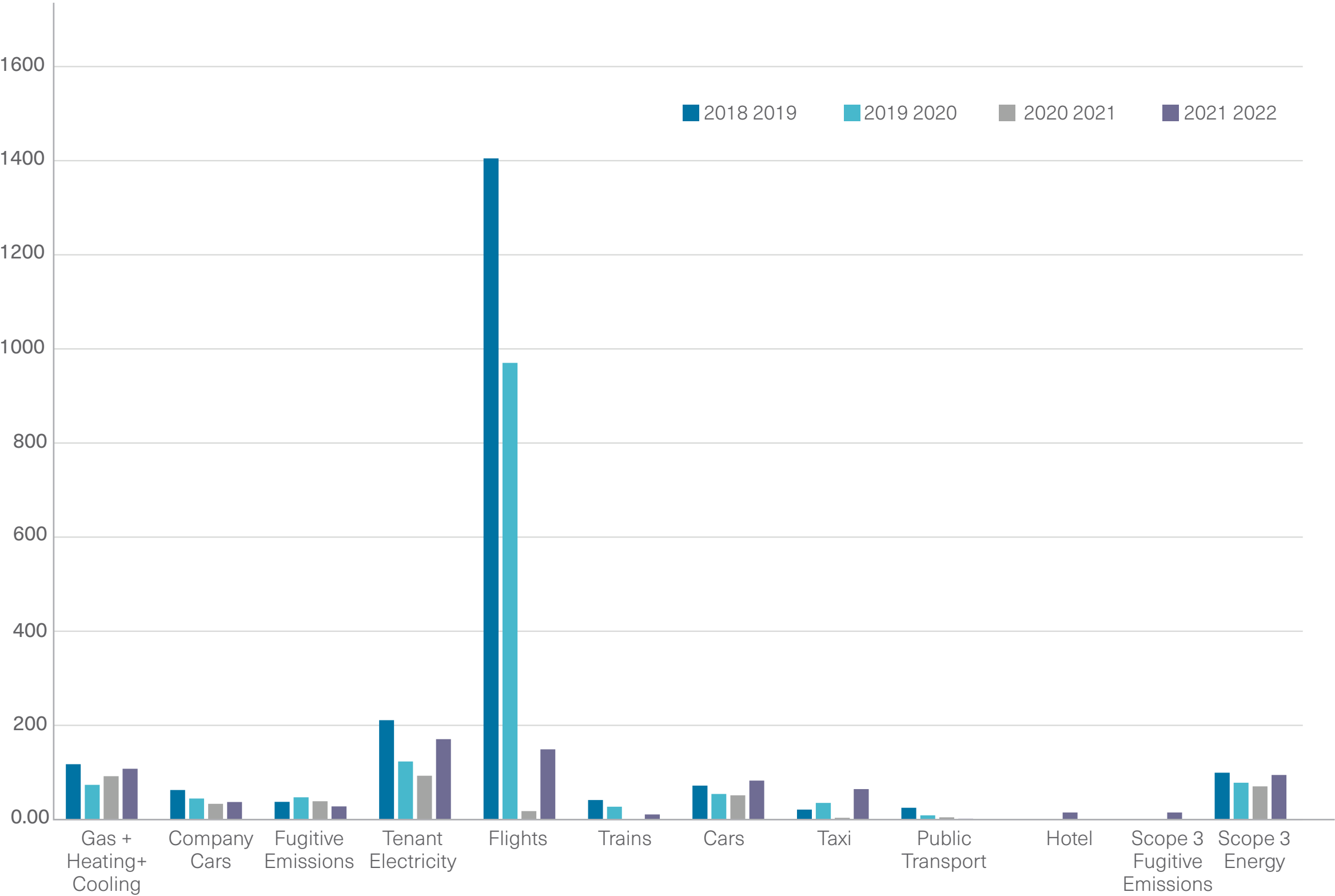
For the fourth consecutive year, we have been actively investing in high-quality carbon offsets.

Cundall Carbon Footprint 2021- 2022



Scope	Boundary	Unit	Total
Scope 1	Gas + Heating + Cooling	tCO ₂ e	107.84
Scope 1	Company cars	tCO ₂ e	37.11
Scope 1	Fugitive emissions	tCO ₂ e	27.90
Scope 2	Tenant electricity (market based methodology)	tCO ₂ e	170.91
Scope 3	Total Business travel	tCO ₂ e	324.42
	Flights	tCO ₂ e	149.32
	Trains	tCO ₂ e	10.92
	Cars	tCO ₂ e	82.60
	Taxi	tCO ₂ e	64.70
	Public transport	tCO ₂ e	1.84
	Accommodation	tCO ₂ e	15.03
Scope 3	Scope 3 Fugitive emissions	tCO ₂ e	15.06
Scope 3	Scope 3 Energy	tCO ₂ e	94.27
Total carbon to offset			668.19

Cundall Carbon Footprint 2018 - 2022



Our Challenges

During the period from July 2021 to July 2022, we observed an increase in emissions across Scope 1, 2, and 3 categories. Here are the reasons behind these emissions increases:

Our Successes

Although our emissions have, on average, increased due to offices hosting more people and staff traveling more, we have seen some reductions that we would like to celebrate.

SCOPE 1



Company Cars: As COVID restrictions were lifted, our business witnessed a rise in travel to various sites and clients, leading to increased emissions from company cars.



Gas, Heating, and Cooling: While some offices remained completely shut down during the pandemic, resulting in zero consumption, our Dublin office relocated to a larger space in 2021. Only our Birmingham office experienced an increase in gas consumption, while the other offices successfully reduced their usage.

SCOPE 1



Gas: Our Manchester office moved into a new space at Fourways House. This office does not use fossil fuels and incorporates natural ventilation and efficient lighting with daylight sensing. It has also received an impressive BREEAM rating. Additionally, Edinburgh, Newcastle, and Bucharest have collectively reduced their gas consumption by an average of 20% through successful behavioural change initiatives.



Fugitive emissions: Our mechanical senior engineer, Jamie Sanderson, has developed a new data collection and calculation process. This process utilizes three different methods. Method 1 relies on servicing records to determine the annual leakage rate of equipment. Method 2 estimates leakage based on the quantity of refrigerant and an estimated leakage rate. Method 3 estimates refrigerant quantity based on cooling load and calculates leakage using an estimated leakage rate. To ensure accurate reporting, specific information such as office location, system type, refrigerant, cooling/heating capacity, and refrigerant charge is required. This innovative process has allowed us to capture more granular and authentic data, resulting in a remarkable 28% reduction in our emissions.

SCOPE 2



Electricity: Significant increases in electricity consumption were observed in our Brisbane, Singapore, Melbourne, Manchester, Dublin, and Edinburgh offices. It is important to note that estimations were used for Brisbane and Melbourne in 2020/2021. Singapore moved to a new and larger office in 2021, while Manchester and Dublin underwent similar relocations in 2022. In the case of Edinburgh, the consumption is calculated based on the entire building's usage. We have identified inconsistencies in their meter readers and are planning to implement smart meters to gain a better understanding of our office's consumption.

SCOPE 3



Business Travel: As Our emissions from business travel increased from 75tCO₂e to 324tCO₂e. This rise can be attributed to the lifting of COVID restrictions, resulting in increased travel to various sites and clients. To align with the net zero standard from SBTi, our scope 3 emissions would need to decrease by 90%, reaching 156tCO₂e by 2040. To achieve this target, we are exploring internal mechanisms such as implementing an internal carbon price or setting a maximum allowance per FTE. The ESG team is currently discussing the feasibility of these measures.

What's next?

Looking ahead, we have identified several key areas where we will focus our efforts to further reduce our emissions and strengthen our commitment to sustainability:



Resubmitting Science-Based Targets (SBTs): Our objective is to revise our SBTs to ensure alignment of our three scopes with our 2018 baseline and the goal of limiting temperature increase to 1.5 degrees. We understand the importance of aligning our emissions reduction targets with scientific recommendations to contribute to global efforts in mitigating climate change.



Implementing a robust Business Travel Policy: To address the increase in emissions from business travel, we are developing a comprehensive business travel policy. This policy will incorporate measures such as a cap allowance per employee or the implementation of an internal carbon price. By encouraging alternative modes of transportation and considering the carbon impact of each trip, we aim to reduce our business travel emissions significantly.

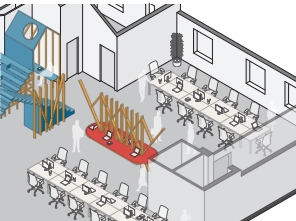


Fit-out guide for new offices: In line with our commitment to sustainability, we have developed a fit-out guide that mandates the use of high energy efficiency measures and eliminates the use of fossil fuels in all new office spaces. By implementing this guide, we ensure that our new offices are environmentally friendly and contribute to reducing our overall carbon footprint. With many of our leases ending in 2025, we have a significant opportunity to adopt sustainable practices in the relocation or renovation of our offices.



Monitoring and improving electricity and gas consumption: We have observed significant increases in electricity consumption across multiple offices. To gain a better understanding of our office's consumption patterns, we are planning to implement smart meters and improve meter readings. This enhanced visibility will enable us to identify areas of inefficiency and implement targeted energy-saving measures, ultimately reducing our Scope 2 emissions.

Moving forward, we are excited to dive into these initiatives and put our sustainability goals into action. By focusing on these key areas and implementing innovative and behavioural change strategies, we are confident in our ability to overcome the challenges ahead. With each step we take, we are making significant progress towards our vision of a more sustainable future.



7 Publicly disclose performance annually using the WRAP database

6 Consider whole life carbon in conjunction with whole life costing

5 Limit upfront embodied carbon

4 Provide onsite renewable energy and storage where possible

3 Eliminate fossil fuels

2 Reduce operational energy demand and consumption

1 Passive design optimisation

Achieving Net Zero Carbon

Clockwise from top: Cundall Dublin natural ventilation space, Cundall air monitoring device, Cundall London low VOC table, Cundall London ultra low VOC furniture.

"quote required: Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin blandit nulla turpis."



Introduction
Good indoor air quality is essential for health, wellbeing and productivity. Our workplaces should provide better than normal qualities of clean fresh air. Mechanically ventilated buildings should always provide ventilation with heat recovery to ensure CO₂ levels are maintained below 1000ppm.

Outdoor Air Quality
In many locations, particularly in urban areas, outdoor pollution concentrations mean that ventilation rates alone cannot guarantee good indoor air quality, where outdoor air quality is known to be a problem, attention should be paid to filter selection and indoor air quality monitoring.

Ventilation rates
Ventilation rates set by the design should meet local regulatory requirements, industry guidance, and project-specific targets (such as WELL) in balance with other considerations including energy consumption. Energy consumption can be reduced in certain circumstances through use of demand control.

Source control + VOCs + clean construction
Emissions from building products such as paint, carpets and furniture, normally dominate for a period of a few weeks to months in new and newly renovated buildings. As the materials age, secondary emissions from the reaction of VOCs with other pollutants may increase. The first consideration is to seek materials which are inherently low emitting, such as those that are re-used or recycled (without new treatment), and new materials such as untreated wood, stainless steel, plastic coated steel, natural untreated stone, and ceramic tiles. The next step is to select materials with evidence of low-emissions properties. BREEAM, LEED and WELL have published lists of labels which comply with or are deemed equivalent to particular standards or to their own VOC requirements.

Construction sites are unavoidably dusty, chemical filled environments. Acts such as demolition, drilling, and sawing can produce high volumes of dust. The use of paints, sealants, and adhesives can introduce potent and potentially harmful Volatile Organic Compounds (VOCs) into a space. To mitigate these risks, ensure through cleaning is included at fitout completion.

Monitoring during construction
With any specification, enforcement and monitoring is essential to achieving a good result. In the case of construction materials, building sites represent a relatively chaotic environment in which to enforce standards. In general, project teams should take an educational approach, coupled with procedures which make it more difficult to do the wrong thing. A number of methods can be used to educate sub-contractors on what materials can and can't be used. These include toolbox talks, posters and specification guidebooks. Often, contractors will be resistant to using substitute products after years of using a product they trust. The training should focus not only to building users, but to themselves. The talk can be appended to the standard Health & Safety induction which every worker should attend prior to being allowed on site.

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Cundall fit-out guide for new offices

Our homes and community



Marlborough Sports Garden

The Marlborough Sports Garden is an award-winning community project to encourage young people from an inner-city location to get outdoors and enjoy sports and other activities.



The charity, Bank Side Open Spaces Trust and the design team are united in their ambition to make this community hub carbon neutral. Cundall have been providing pro bono design and consultancy services to support this community project. This community project is available to everyone, but in particular local school pupils.

Winner: The Future Place category of The Pineapple awards at The Festival of Place.

Winner: Special Community Prize category of The New London Architecture awards, which celebrates projects of all sizes that contribute to the creation of a more sustainable, civilised, and egalitarian London.



Key design features



Community café with zero waste



Dance and yoga studio



Outdoor sports garden



Climbing plants



Net zero operation approach



All-electric, with heat pumps providing low carbon heating and cooling



A roof mounted photovoltaic array



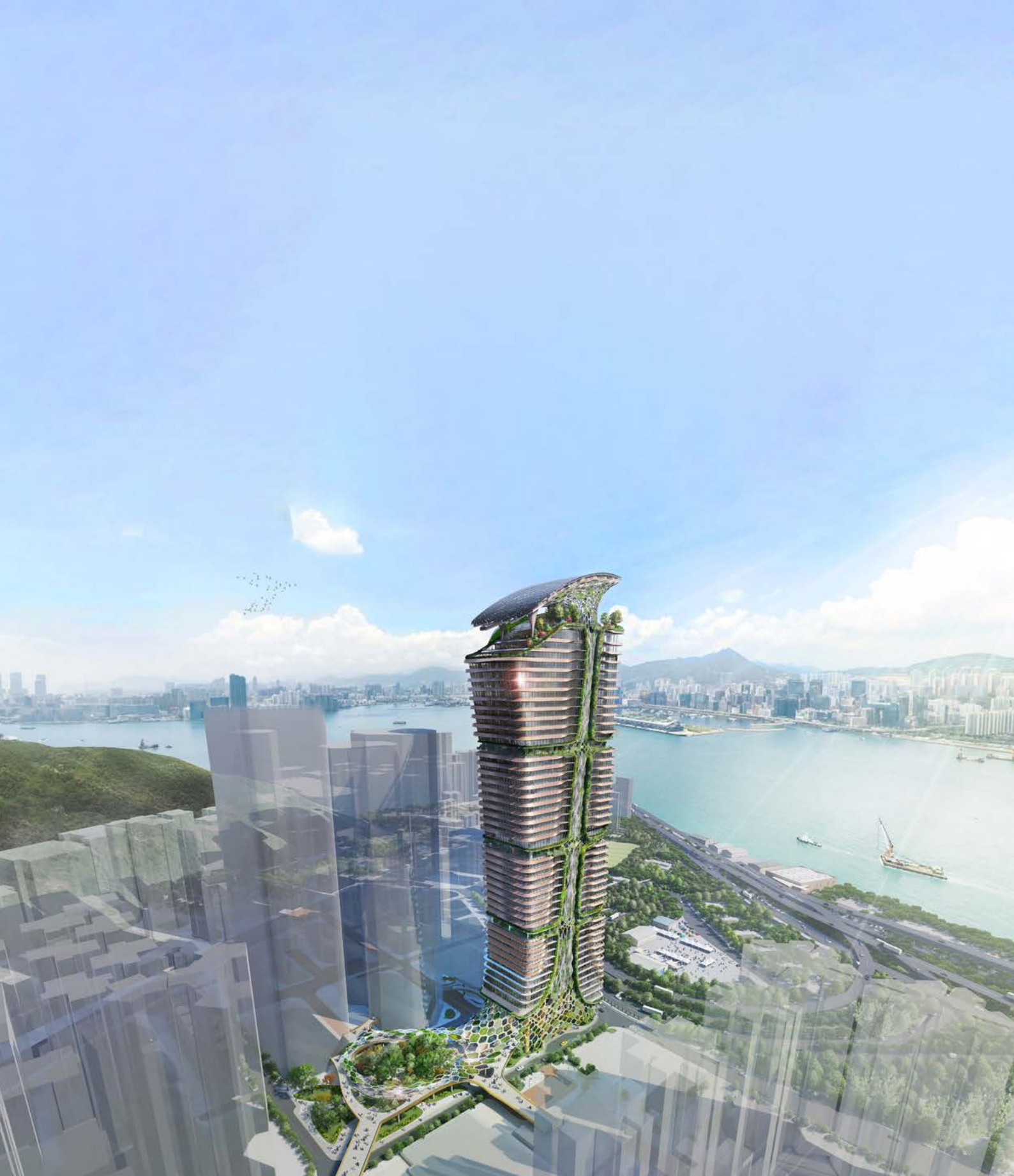
Onsite battery storage



Rainwater collected from the new roof



Reclaimed materials



CUNDALL