



**United Nations**  
Global Compact

**ARUP**  
Communication on Progress  
2018



# The Ten Principles of the United Nations Global Compact



## Human Rights

- 1. Businesses should support and respect the protection of internationally proclaimed human rights
- 2. Make sure that they are not complicit in human rights abuses

## Labour

- 3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining
- 4. The elimination of all forms of forced and compulsory labour
- 5. The effective abolition of child labour
- 6. Business should uphold the elimination of discrimination in respect of employment and occupation

## Environment

- 7. Businesses should support a precautionary approach to environmental challenges
- 8. Business should undertake initiatives to promote greater environmental responsibility
- 9. Business should encourage the development and diffusion of environmentally friendly technologies

## Anti-corruption

- 10. Businesses should work against corruption in all its forms, including extortion and bribery

## Arup Mission Statement

### “To shape a better world”

- To enhance prosperity and quality of life
- To deliver real value
- To have the freedom to be creative and learn

A better world is one that provides improved living conditions for its inhabitants while addressing fundamental environmental, social and economic concerns. Through our projects, we seek to create places where people are safer, healthier, enjoy greater amenity, are inspired by their environments and find new opportunity and prosperity. By creating sustainable and equitable environments, each and every one of us can positively influence the future of the communities where we live and work.

We are taking action on a global basis to advance the UNGC principles on human rights, labour, the environment and anti-corruption.

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## United Nations Global Compact: Communication on Progress 2018





CEO STATEMENT

Arup remains a proud signatory of the UN Global Compact and will continue to support and advance our shared ambition of driving change across all aspects of corporate social responsibility. We view our annual Communication on Progress as a welcome opportunity to highlight our commitment to responsible and sustainable business practices.



In 1970, our founder Ove Arup, provided us with an enduring set of values and aims which include: being a humane organisation; straight and honourable dealings; social usefulness, and maintaining good reputation and influence. These have become integral to our culture, our thinking and behaviours. As a result we attract people to join us who share these values.

While these values have a strong resonance with the Principles set out in the UN Global Compact, our purpose is also “to shape a better world” through the work that we do.

Often this is through our projects where we apply sustainable design principles and encourage corporate social responsibility, but it also includes how we work and who we work with, for example:

- In September 2017, Arup became the first engineering firm in the UK to receive the National Equality Standard (NES) certification.
- Arup is currently shortlisted for the Association of Consulting Engineers (ACE) awards: Social Impact Champion of the Year and Diversity & Inclusion Champion of the Year 2018.
- Arup currently ranks 27th in The Times Top 100 Graduate Employers 2017-2018, which is an improvement on the previous year’s ranking at 33rd.

- Arup named one of the top management consultancies in the UK after Financial Times ranking saw clients nominate Arup in three categories as their trusted advisor.
- We have more female leaders than ever before - 20.94% in March 2018 compared to 20.69% in March 20017. We are aiming to improve our gender balance by reaching our target of 40 to 60% of each gender in our membership as soon as we responsibly can.
- Looking at our graduate intake for September 2017, we welcomed just under 300 new graduates and apprentices into Arup UKIMEA. This represents the most diverse intake to our Early Careers programmes with entrants recruited from over 60 universities, 33 different nationalities and close to 50% female to male split.
- Arup named one of the leading management consultancies in the UK for 2018. Financial Times ranking saw clients nominate Arup in three categories as their trusted advisor. Whittling the 8,000 strong list of consultancies down to 187 through client surveys, our clients recommend us in the following categories, receiving four out of a possible six stars:
  - Data analytics and big data ★★★★★
  - Finance, risk and compliance ★★★★★
  - Sustainability ★★★★★

This is a great achievement that demonstrates our breadth of skills and deep client relationships that enable us to be a trusted advisor.

- Arup features in the Top 50 Employers for Women 2018 shortlist by The Times newspaper for the seventh time in eight years.

We remain passionate about promoting the aims of the Global Compact, and to advancing corporate responsibility more widely within our global sphere of influence. We look forward to supporting the UN Global Compact in 2018 and beyond.

I hope you will read it with interest.



Geoff Hunt  
Chief Operating Officer  
Arup UKIMEA



INTRODUCTION

We view our challenge as ‘Shaping a Better World’, and at the heart of this is a deep understanding of the issues driving the world’s growing urban environments – from the effects of climate change to meeting the needs of a growing population.

Arup is a global company and the creative force at the heart of many of the world’s most prominent projects in the built environment. We have:

- over 14,000 people worldwide
- offices in over 35 countries
- over 70 years experience
- projects completed in 170 countries
- over 13,000 fee earning project
- trust ownership

Arup is owned in trust for the benefit of our employees, giving us all a genuine share in our success. An employee’s share allocation is based on their grade and length of service, with profit share paid twice a year in addition to salary.

Our independent ownership structure allows the needs of our clients, our commercial imperatives, and our conviction to influence all our decision-making, resulting in thoughtful contributions to society.

Many of Arup’s projects leave a legacy to subsequent generations: a legacy that outlasts any one individual. With over 13,000 projects at any one time, Arup is doing the best possible job for current and future generations. The power to influence the future of the built environment carries with it a weighty responsibility.

Putting sustainability at the heart of our work is one of the ways in which we exert a positive influence on the wider world. Put simply, Arup people are driven to find a better way.

Our accomplishments 2017-2018

Joe da Silva awarded IStructE Gold Medal



Jo da Silva, Director of Arup’s International Development Group and Arup Fellow, has been awarded the Institution of Structural Engineers’ 2017 Gold Medal. The medal recognises the outstanding leadership she has provided as both a structural and humanitarian engineer, and for her distinguished and cross-sectoral work on urban resilience.

Jo, an Officer of the British Empire, said: “*Looking back at my career I have been lucky to work on some wonderful projects, but honestly my proudest achievements have always related to designs that help build better societies.*”

*It is a great privilege to join such a distinguished list of Gold Medallists, and I would like to thank the Institution for the honour.”*

Martin Powell, Chief Executive of The Institution of Structural Engineers, said: “*The Gold Medal is the Institution’s most prestigious award, presented to those individuals who have made an outstanding contribution to the advancement of structural engineering, with previous winners including Ove Arup, Pier Luigi Nervi, Felix Candela and Edmund Happold.*”

International Women’s Day 2018

A celebration of the cultural, political, social and economic achievements of women. Across our firm, offices and teams are getting involved in different ways, participating in this important opportunity to recognise the contribution women make.

This year’s theme is #pressforprogress – encouraging a policy of equal pay for equal work across all sectors of the economy. For us as a firm, International Women’s Day is an opportunity to reflect on our own progress towards becoming an employer of choice for women at all levels of our organisation.

Offices across Australasia will be holding events on the day. They’ve also identified flexible working conditions as key to addressing gender equality and are developing videos on the subject. Hong Kong is showing a film and holding an informal gathering to discuss the issues raised by IWD2018.

Several European offices are using IWD2018 to kick off another year of Girls’ Day events, an Arup tradition of inviting school-aged girls to our offices to improve their awareness of what a career in scientific, technological, engineering or mathematics (STEM) might offer.

Three offices in Ireland are planning to show the film ‘Hidden Figures’, which tells the story of the female mathematicians behind NASA’s male-dominated space programme in the early 1960s. The Madrid team have just hosted a lunch talk about the equity and fairness during the last salary review cycle and is also planning posters to recognise the contribution made by our women in Spain.



Arup named Diversity and Inclusion Champion at the Association of Consultancy Engineering (ACE) Awards



The Arup team at the ACE Awards in June 2018

Our mission is to shape a better world and it’s our people’s diverse range of skills and ideas that enable us to do this. ACE awarded Arup Diversity and Inclusion Champion of the Year in June 2018, in recognition of diversity and inclusion being at the heart of Arup’s values, as well as linked to our broader business strategy, and that we embrace the benefits of a truly diverse workforce. The ACE Awards are coordinated by the Association for Consultancy and Engineering, the leading trade association for the sector. They showcase success and best practice across engineering and consulting globally.

Connect Women launches in the Americas

Building on the success of Connect Women in the UKIMEA Region, Connect Women has now arrived in the Americas Region. The new group will be open to all participants, regardless of gender. It will focus on promoting gender equality and inclusion and providing opportunities for mentoring, networking and skills development for career progression. With its support for Connect Women, the Americas Region will

position the firm to attract, retain and engage women. Connect Women’s goals and priorities align with our wider Equality, Diversity and Inclusion (EDI) aspirations and the plan to ensure women are more equally represented by increasing the percentage of women in our membership to at least 40% in each Region by 2023.

Global Challenge 2017 winners



Three successful projects have been awarded funding by the Community Engagement Programme Global Challenge that forms part of the firm’s commitment to the U.N.’s Sustainable Development Goals (SDGs).

Launched in May, twenty-two great ideas were submitted with six being shortlisted to develop into full proposals. The initial three projects are listed below and you can find out more about them here.

- Emergency WASH aims to support sanitation and reduce disease transmission in disaster zones.
- WASH Basins aims to make development of water and sanitation more sustainable in remote parts of India.
- Vanuatu WASH aims to work with local communities to embed WASH best practices and encourage entrepreneurship that can bring better sanitation services to local people.

Graduate of the Year, December 2017

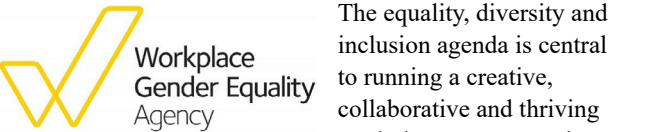
Charlotte Murphy has won Graduate of the Year in the Consultant category at New Civil Engineer (NCE) magazine’s Graduate Awards 2017 on 1 December. Charlotte’s winning idea was to create a recognition and best practice event for engineers

who “Do More” through charity work and other extra-curricular activity. NCE plan to work with her to develop this idea further.



Charlotte Murphy receiving her Graduate of the Year award in the Consultant category

Arup recognised for gender equality in Australia



The equality, diversity and inclusion agenda is central to running a creative, collaborative and thriving workplace. Our commitment has been recognised with the firm being named as an Employer of Choice for Gender Equality by the Australian government’s Workplace Gender Equality Agency (WGEA).

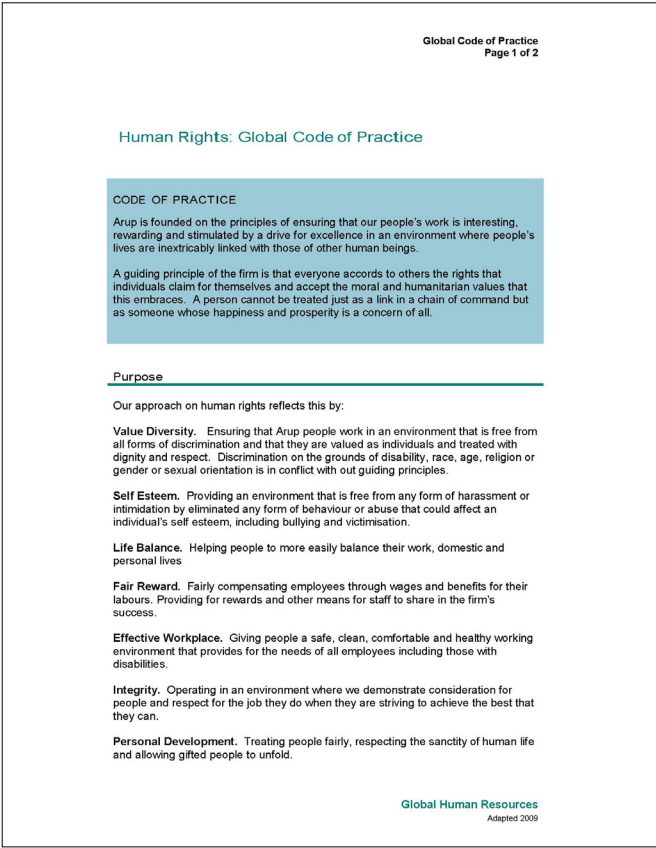
We have received this recognition each year since its inception in 2014. This year, the criteria involved demonstrating action and progress across a range of issues, including the gender pay gap, sex-based harassment and discrimination, flexible working and other initiatives to support family responsibilities.



Arup supports and respects the protection of internationally proclaimed human rights, such as United Nations Universal Declaration of Human Rights, and ensures that it is not complicit in human rights abuses.

Our Commitment

Our founder, Sir Ove Arup, believed that our work should be both sensitive to the environment and also have a social purpose. His early commitment to the principles of sustainability continues to influence us today, not only in the way we conduct our business, but in how we treat our people and the way in which we interact with our communities and society at large.



We have a written Global Human Rights Code of Practice, which states that:

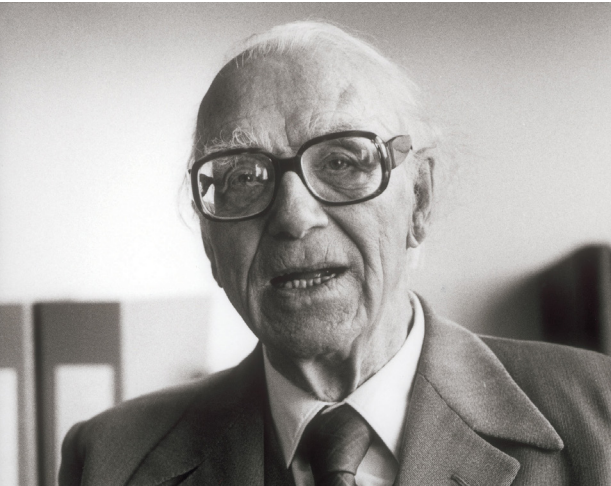
- ‘Arup is founded on the principles of ensuring that our people’s work is interesting, rewarding and stimulated by a drive for excellence in an environment where people’s lives are inextricably linked with those of other human beings.’
- ‘A guiding principle of the firm is that everyone accords to others the rights that individuals claim for themselves and accept the moral and humanitarian values that this embraces. A person cannot be treated just as a link in a chain of command but as someone whose happiness and prosperity is a concern of all.’

Our approach to human rights covers the following areas:

- Diversity
- Self esteem
- Life balance
- Fair reward
- Effective workplace
- Integrity
- Personal development
- Acting honourably
- Social responsibility
- Respect

Our Approach

Key Speech



Sir Ove Arup

A speech written and delivered by our founder Sir Ove Arup in 1970, defines who we are, and sets out our core values and guiding principles. The Key Speech is the high-level framework that guides appropriate behaviour within the firm. The speech sets out the firm’s humanitarian attitude which “leads to the creation of an organisation which is human and friendly in spite of being large and efficient...this attitude also dictates that we should act honourably in our dealings with our own and other people. Humanitarianism also implies a social conscience, a wish to do socially useful work, and to join hands with others fighting for the same values.”



All employees receive a copy of the Key Speech as part of their induction. You can view the Key Speech here: <https://www.arup.com/perspectives/publications/speeches-and-lectures/section/ove-arup-key-speech?query=key%20speech>

Global Human Rights Code of Practice

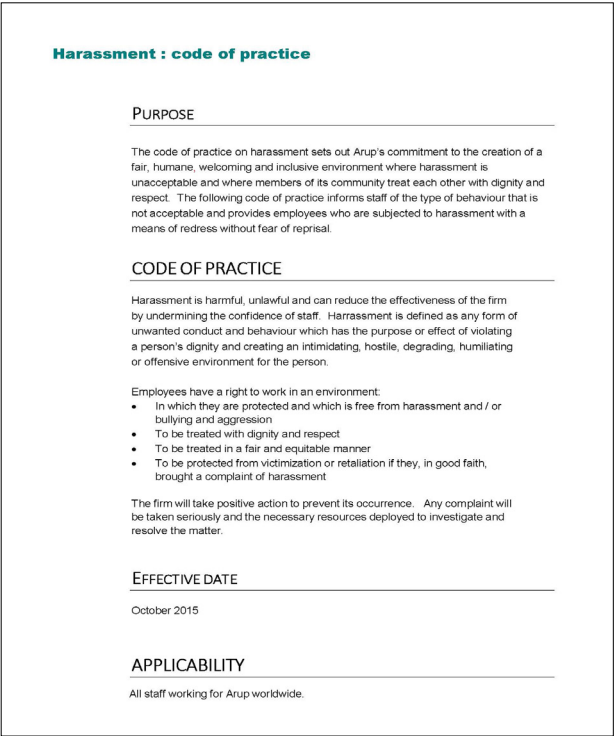
Arup’s written Global Human Rights Code of Practice sets out the firm’s expectation and approach on human rights. It is available to all staff via the company intranet. Please see attachment 1.

Global Harassment Code of Practice

Arup believes that all employees have a right to be treated with dignity and respect while at work and when representing the company outside work. The Global Harassment Code of Practice informs employees of the type of behaviour that is not acceptable and provides employees who are subjected to harassment with a means of redress without fear of reprisal. We also have a local Harassment and Bullying UK Policy which describes unacceptable conduct and provides additional guidance on resolving any incidents. Please see attachment 2.

Global Health & Safety Policy

Arup promotes health and safety at work of all employees including temporary and contract staff, and other persons affected by our actions. The firm has set objectives to provide health and safety training, specialist advice, information instruction and supervision, when necessary to al levels of personnel. The firm operates within a management system that is registered as meeting the requirements of OHSAS 18001 or equivalent. You can view a copy of our Health and Safety policy in.attachment 3.



Page taken from our Global Harassment Code of Practice

Disciplinary Procedure

The disciplinary procedure is designed to be supportive and to encourage improvements in individual conduct and performance. Disciplinary action follows for individuals who abuse Arup’s policies and procedures, including the Global Human Rights Code of Practice, and for any “*actions which undermine working relationships with colleagues and/or other organisations, or which may compromise our integrity as a firm and our honourable dealings with people.*”

Sustainable Procurement

Arup’s commitment to Human Rights in its procurement is managed through the sustainable procurement plan which feeds into Arup’s sustainability strategies. The plan is built on six themes which are:

- 1. Environmental management
- 2. Supplier equality and diversity
- 3. Support of fair practices in our supply base
- 4. Ethical trading
- 5. Promoting fair employment practices
- 6. Community benefits

Each supplier’s sustainability ethos is a key feature within Arup’s tendering process to select responsible suppliers. Furthermore, Arup works to engage its suppliers in working together to deliver improved sustainability performance.

We embed all aspects of our Sustainable Procurement Vision, and category specific deliverables into our request for proposal (RfP) processes. In 2015, Arup tendered our contract for supply of photocopier/printers. The delivery of improved energy consumption technology was integral to our goal of preventing wasted prints and unnecessary colour prints.

Power consumption changes are helping to reduce power usage by half compared with the old fleet, and environmentally sustainable waste management ensures Arup remains committed to its environmental values.

We have also revised our cleaning and catering provision to reflect our commitment to the Living Wage across the UK.

Activities and Implementation

Communication of Policies and Procedures

All employees are made aware of our strategies, policies and procedures with respect to human rights, equal opportunities, diversity and inclusion, sustainability, performance, and harassment. These are also made available to all staff via our intranet and our human resources team.

Arup has global Equality, Diversity and Inclusion, Human Rights and Harassment Codes of Practice. These codes sit alongside Equality and Diversity and Dignity at Work Policies in our Regions and provide positive drivers for change.

Our focused two-year Diversity and Inclusion Strategy for the UKIMEA Region is part of our Arup Improvement Plan and drives our business to cultivate an inclusive working environment. A copy of our Equality, Diversity and Inclusion Policy can be seen in attachment 4.

As a humane organisation we aim for zero incidents of harassment, bullying and grievance. In the event of a breach of our policies or a reason for grievance, we provide guidance for informal and formal resolution in our Dignity at Work UK Policy. This also identifies the roles and responsibilities of our managers, our human resources team, and our staff. Please see attachment 5.

Guidance for staff on how to resolve human rights issues is provided within our Arup Management System (AMS) policies and procedures, and from our human resources team. The AMS is compliant with ISO 9001:2008, OHSAS 18001:2007 and ISO 14001: 2004.

Training and Support

We provide training in Health and Safety, sustainability, and diversity and unconscious bias awareness for leaders and recruiters. In 2009, we created our Inclusive Leadership Programme. The aim was to give leaders the skills and knowledge to recognise that everyone has unconscious bias, and to understand how to manage that bias.

We have a Sustainable Procurement Vision Statement, in which creating diversity is one of the key objectives. We are embedding this vision and its principles throughout our procurement processes and are communicating this vision to new suppliers at tendering stage.

Equality, inclusion and diversity are central to Arup’s sustainable procurement objectives. To achieve this, we have revised our sourcing practices, supplier questionnaires, tender scoring criteria and supplier contracts, to ensure that equality, inclusion and diversity are properly considered and evaluated throughout our procurement processes.

Our Sustainable Procurement Plan explicitly targets improvements to the equality and diversity of our supply base throughout all of our purchasing categories. For example, within our Recruitment Category, over 50% of our Preferred Supplier List (PSL) are now SMEs and BMEs.

We have conducted a number of Supplier Conferences that have enabled our SME and BME’s to understand Arup’s sustainability vision and objectives, along with engaging in workshops to share experiences and best practice.

Our employee support also includes networks, forums mentoring and events for female and LGBT staff, as well as staff from minority groups, all religions and cultures.

Outcomes and Progress

Arup achieves UK National Equality Standard



In September 2017, Arup became the first engineering firm in the UK to receive NES certification.

Our region’s commitment to the Equality, Diversity and Inclusion (EDI) agenda is recognised formally with this independent

assessment across a comprehensive range of criteria. It acknowledges actions such as our visible support of Pride Week, International Women in Engineering Day as well as solid progress in key areas such as 48% of our 224 graduate intake being female in 2017.

EDI Leader Saskia Lear has worked tirelessly to keep momentum going since our initial assessment in January 2017 where we narrowly missed being accredited.

Dervilla Mitchell our region Chair said “*I am absolutely delighted that Arup has been awarded NES certification. The EDI agenda is tremendously important to us. The case for EDI making for a more effective business has been made time and again, but perhaps more importantly, we want our firm to be a place where staff can come to work as their true selves every day*”.



## #BuildingEquality on the streets of Manchester



Arup took part in Manchester Pride in collaboration with #BuildingEquality, a group founded in 2015 by representatives of AmecFoster Wheeler, Arup, Balfour Beatty and Lendlease. The group aims to promote LGBT++ inclusion and diversity across the construction industry.

Arup staff marched alongside over 60 colleagues from 11 companies across the industry. The group represented a united and collaborative construction industry keen to change its image and send out a positive message of inclusion. The centrepiece of our entry was a digger adorned with rainbow colours which was greeted by much cheering from the many crowds that lined the route.

There is now considerable enthusiasm for establishing a North West region sub-group of #BuildingEquality and we are keen to play a leading role in this network.

## Meeting humanitarian needs: Global Challenge 2018



From our China water purification project, this photo shows a water pump used by the Songlin Village Community

Providing purified drinking water in rural China and improving the lives of dairy farmers in Sri Lanka are just two of the five projects which have been selected for funding as part of our Community Engagement Global Challenge.

Representatives from our firm will work closely with NGOs and other partners to deliver tangible results within six to twelve months.

Mark Fletcher, Global Water Lead and member of the Global Challenge Review panel, commented: *“Our Community Engagement Programme gives us time and resources to focus purely on how we can shape a better world for disadvantaged, vulnerable and marginalised communities. It is great to see the ideas, ingenuity and enthusiasm with which staff across all regions are approaching this challenge. We hope even more staff are inspired to put ideas forward in the next round of the challenge when it opens later this year.”*

## Hackney Winter Night Shelters

From October to December 2017, the Arup Fire team conducted a number of Fire Risk Assessments (FRAs) on behalf of Hackney Winter Night Shelters (HWNS) – a charitable organisation which provides sleeping accommodation for homeless occupants during the coldest months.

Our main objective was to ensure that occupants sleeping in the temporary night shelters are sufficiently protected in the event of fire. Arup Fire undertook Fire Risk Assessments for a total of 15 venues, identifying the key fire risks which had the potential to cause injury to vulnerable occupants whilst sleeping in these spaces. The team advised on how these fire risks could be avoided or mitigated, and also provided advice to staff running the facility in fire prevention.

The venues used for the scheme ranged from small, stand-alone church halls, to a large Grade II\* listed church with a capacity of 1400 occupants, regularly used to host live music events.

The charity operates via food and bedding donations, and is assisted by local volunteers. Occupants of the shelter are provided with a hot meal and a warm bed from November to March. The scheme also helps to provide a route out of homelessness by arranging more stable accommodation, travel tickets and new home packs for occupants.

As a result of these fire risk assessments, a total of 100 members of the local homeless community were taken off the streets throughout the winter months. For further details, visit: <http://www.hwns.org.uk/about-us/>

## Arup’s urban childhoods thinking is TIME mag’s “best idea”



Our research into designing child-friendly cities, ‘Designing for urban childhoods’, has topped a list of five best ideas, according to TIME magazine.

Number one in the list, ‘How to design cities for children’ asks what it means to design cities for children,

what the benefits are, and underlines Arup’s role in moving this progressive agenda forward.

Our report was the subject of a CityLab article which featured commentary from credible urban thinkers across the world. This thinking, part of the Cities Alive series, has been covered in the media widely, including The Sunday Telegraph, FT, Curbed, and The Planner. The ideas are gaining traction and we are exploring how the recommendations from the report can be integrated into various projects with a number of clients and partners.



Our research has topped a list of five best ideas according to TIME magazine

## Our People

We confirm that in the last three years we have not been the subject of a formal investigation by the Equality and Human Rights Commission or an equivalent body, on the grounds of unlawful discrimination, and no claims have been made against us.

In the last three years, no finding of unlawful discrimination has been made against Arup by an Employment Tribunal, an Employment Appeal Tribunal or any other court (or in comparable proceedings in any jurisdiction other than the UK).

We are currently reviewing all of our processes relating to the assessment and compliance of our third party providers to ensure that the organisations we work with align with our working values and ethics. We will be looking to add questions relating to equality and anti-discrimination legislation in our supply chain questionnaire.

## Health and Safety

Our Global Sustainability Strategy defines measures of success which includes the health and safety of our staff (e.g. lost time accidents).

- Lost time accidents for 2016-2017: 0.05 per 100,000 employee hours
- Accident Incident Rate for 2016-2017: 0.164 per 1000 employees
- Accident Frequency Rate for 2016-2017: 0.009 per 100,000 employee hours
- We have provided Asbestos Awareness training in the UK to 449 people in the last year (FY 2017/2018)
- The Group Health Safety and Wellbeing Committee meets every three months, and is attended by H&S Directors from each region. Each Region also has a HSW Committee which meets every 1-3 months, with representatives from the business.

Arup is registered with the following construction industry Health and Safety Accreditation schemes and safety groups:

- Avetta (No: 69886)
- BuildingConfidence (No: 4900538)
- CHAS (Registered for all 14 UK offices and companies)
- LRQA SSIP (No: 10046884)
- RISQS (No: 060548)
- SMAS (No: 68125)
- UVDB Verify (No: 060548)
- CHSG (Construction Health & Safety Group)
- ROSPA (Royal Society for the Prevention of Accidents), Membership No. M403110773
- Consultants Health and Safety Forum

## Sustainable Procurement


Examples of our activities include:

- Working with our catering supplier to source and purchase fair trade and rain forest alliance certified products such as coffee, tea, sugar and bananas, and verifying the authenticity of the stated certification.
- Ensuring the application of the London Living Wage for contracts with our suppliers of on-site services such as catering, cleaning, security and reception.
- Ensuring all disposable packaging is biodegradable and/or recyclable.
- Reviewing our supply base to ensure that there are no and will be no anti-competitive instances.





Arup staff celebrating Pride Week 2018 in our London office

 We work to ensure that everyone’s contribution is valued and successes are celebrated throughout the firm. We endeavour to ensure that our processes, including training and development, encourages knowledge sharing, intellectual growth and stimulation.

### Our Commitment

We are committed to the International Labour Organisation’s (ILO) fundamental principles and rights at work, including:

- freedom of association and the effective recognition of the right to collective bargaining;
- the elimination of all forms of forced or compulsory labour;
- the effective abolition of child labour; and
- the elimination of discrimination in respect of employment and occupation.

Subject to the relevant laws in the countries where we operate, we fully respect the right of our people to freedom of association and representation.

We aim to ensure that our people have satisfactory wages and working conditions, and that there is no exploitation of labour.

We do not employ individuals that are younger than the legal school leaving age.

We ensure that Arup people work in an environment that is free from all forms of discrimination - age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, sexual orientation - and that they are valued as individuals and treated with dignity and respect.

Addressing gender imbalance in Arup is our priority in a wider diversity drive. We believe improving gender balance will help us to nurture creativity and innovation, tap hidden capacity for growth and improved competitiveness, and positively impact financial performance. The proportion of women employees at all grades, and the number of women in management

positions has continued to rise annually since we commenced measurements in 2008.

### Our Approach

#### Key Speech

One of the six core principles is a “*humane organisation*” which should result in satisfied members. All employees receive a copy of the Key Speech as part of their induction: <https://www.arup.com/perspectives/publications/speeches-and-lectures/section/ove-arup-key-speech?query=key%20speech>

Sir Ove Arup also said “*If we can reach a stage where each man or woman is respected for the job they do, and is doing his or her best because the atmosphere is right, because they are proud of what we are and do and share in the general enthusiasm, then we are home.*”

#### Freedom of Association and Representation

Arup’s terms and conditions are not governed by a collective agreement.

Arup is a 14,000 strong employee owned organisation. In 1977, our founder, Sir Ove Arup, gifted the firm to itself, creating a visionary arrangement based on trusts, which are responsible for the long-term custodianship of the firm for the benefit of past, present and future employees. Membership of the trusts includes past and present employees. As a self-owning organisation, we have no external shareholders, which is fundamental to the way we are organised and how we operate.

We have developed peer communications channels and we have effective formal (‘Airtime’) and informal channels between management and staff.

### UKIMEA Regional Diversity & Inclusion Strategy

Arup has a global commitment to being an ‘employer of choice’ manifested in our Global Diversity Policy, Action Plan and associated training. Diversity is championed at Group Board level by Geoff Hunt and Region Chair Dervilla Mitchell who are supported by our recently appointed Director of Equality, Diversity and Inclusion, Andrea Callender. Our vision is “*to create a work environment based on fairness, respect and merit which embraces difference and enables talented people to flourish.*” Our UKMEA region 2015 - 2017 Diversity Strategy was formulated to deliver this vision, and is based on seven key principles which shape our activities moving forward (see attachment 6). We are also in the process of developing a new region strategy for 2018 and beyond.

### Equal Opportunities Procedure

Global and regional equal opportunities procedures exist to ensure that employment practices are applied fairly and equally. These procedures cover: recruitment, training, career development and promotion, pay, selection for redundancy, grievance and monitoring. Every member of Arup has a responsibility to uphold our equal opportunities codes of practice in order to ensure that everyone with whom we work is treated equally and honourably. The leaders have a particular responsibility to ensure that grievances are investigated, that confidentiality is maintained and that appropriate action is taken. All senior leaders are trained in the legal obligations surrounding equal opportunities and we have an inclusive leadership programme to equip leaders to act as role models and challenge the status quo.

### Conduct, Performance and Disciplinary Procedure

Our global Conduct and Performance Code of Practice is contained within our Ethics Code of Practice and provides guidance on the standards expected from all our members.



The firm takes its commitment to equal opportunities very seriously. Any acts of discrimination by its members will result in disciplinary action, including termination of employment if appropriate, in accordance with the firm’s disciplinary procedures. Please see attachment 11 for our Global Ethics Code of Practice.

Harassment Procedure

Global and local harassment procedures are in place. Any complaint of harassment is taken seriously and the necessary resources deployed to investigate, resolve the matter and take appropriate action.

Grievance Code of Practice

Arup believes that all its members should have the opportunity to discuss any matter of concern with the person to whom they report. In most cases employment related matters are likely to be resolved informally in this way. If, however, the outcome of informal discussions is unsatisfactory then the issue can be addressed through the local grievance procedure. For a copy of our UK Grievance Procedure please see attachment 8.

Diversity and Inclusion: Code of Practice and UKIMEA Diversity Strategy

Arup’s Global Diversity and Inclusion Code of Practice sets out our aim to “*recognise and respect each others’ differences and strive to build a working environment where our different values and perspectives are actively harnessed to create the best solutions for our equally diverse client base*”. Our Diversity Strategy is built into our operating budget, and discussed at every Board meeting. The diversity and inclusiveness of our workforce is supported by our ethics on sustainability and human rights. Arup’s principles of diversity and inclusion extend to our clients, our suppliers and all those with whom we choose to work. Our UKIMEA region 2015-2017 diversity strategy sets measurable diversity improvement actions for this period which are described overleaf. Please see attachment 7 for our Global

Diversity and Inclusion Code of Practice.

Young and Early Career Staff

There are special UK laws to protect the employment rights of young workers (aged 16 to 18) which Arup adheres to. These concern health and safety, what jobs they can do, when they can work, and how many hours they work. Arup does not employ young people under the age of 16, in line with legislation.

The Early Career Group was formed in 2012 by the UKIMEA Board. It offers a forum to discuss issues and share best practice internally, and promote collaboration both in Arup and externally for early career staff. It captures and acknowledges the ideas, opinions and concerns of those at the early stage of their careers for betterment of the firm, to make a difference from the bottom-up.

Graduate and Apprentice welcome events 2017

During September 2017, we welcomed 224 new graduates and 70 apprentices into Arup UKIMEA region, with two welcome events held in Manchester and Warwick. This represented the largest and most diverse ever intake to our Early Careers programmes and a significant investment in the future of our organisation.

This year, we had a record number of apprentices join Arup. Our Apprentices enjoyed three days of talks, group activities and technical workshops. After the initial induction, apprentices joined their new teams and began working on live projects straight away.

We have a dedicated apprentice area on our intranet, which includes guidance, presentations and tips from previous entrants. We have also set up an apprentice forum: an internal network where apprentices can discuss issues, and exchange ideas and news.

Flexible Benefits

To retain the best staff we offer a strong remuneration and benefits package with competitive salaries, profit share payments and a flexible benefits fund to spend on the benefits that suit individuals’ requirements. Some of the benefits include: 25 days holiday plus public holidays, interest free travel season ticket loan or bicycle loan, free eye-tests, private medical insurance and life and accident insurance. The flexible benefits fund can be used to buy benefits that suit each employee, or can be taken as cash on top of their salary. Our occupational health service is an important part of our integrated health programme and helps us to minimise health risks at work and ensure fast, effective help with any health problems that affect staff well-being. These services are designed to provide a more comprehensive, responsive and integrated proposition which will help us to deliver on our new occupational healthcare vision.

Flexible Working

We offer enhanced maternity and flexible working benefits above the statutory requirements. We have a flexible working policy that encourages anyone wishing to work flexibly to make a request to their line manager and find a solution that works for them. In 2015, we introduced a new shared parental leave policy, recognising the importance of supporting working parents in balancing their home and working life. An enhanced shared parental leave pay, in addition to the statutory pay provisions, allows staff the opportunity to plan and manage the care of children in a way that suits their family circumstances.

Activities and Implementation

Global Sustainability Strategy

We report our global performance publicly in our Annual Report, UKIMEA Sustainability Report, and Global Sustainability Report.

Whilst our biggest contribution to a sustainable future comes through our client work, we recognise that it’s as important for us to monitor our own performance and actions. This focus on ‘walking the talk’ is critical if we expect our clients to believe in our ability to build sustainable principles into their projects.

To achieve this ambition, we have established a framework of key performance indicators that measure our annual progress against pre-set targets. Our UKIMEA region data covers performance from 1 April 2016 to 31 March 2017, in our 26 buildings across the UK, India, Middle East and Africa.

Energy, water, waste, paper and carbon figures exclude our Africa offices where data collection remains challenging; for example:

Energy use

- 0.5% increase per employee
- 2.8% increase overall

Paper use

- 20% reduction copier and printer paper per employee

Carbon emissions

- 5.5% reduction per employee
- 1.4% reduction overall

Water use

- 5% reduction per employee
- 3.1 reduction overall

Management systems

- 100% offices certified to ISO 14001 Environmental Management System
- 16% of projects over £150k report specific sustainability objectives

Sustainability training

- 1.3 hours of training received per employee

UKIMEA Regional Diversity and Inclusion Strategy 2015-2017

All of us want to feel valued and for this, you need to be treated with dignity and respect. And yet we know sometimes barriers exist which prevent everyone from being treated equally. Our diversity and inclusion strategy 2015/17 aims to address this, and our approach is based on the concept that people should be valued as individuals for reasons related to their business interests, as well as for moral and social reasons. In short, it is the right thing to do.

It is based on seven key principles, with associated measures, agreed by the UKIMEA Board. These shape our activities and lead to actions undertaken across UKIMEA. These are:

1. Informed and measured
2. Flexible
3. Connected and engaged
4. Balanced
5. Transparent and accountable
6. Industry leading inclusive recruiter and employer
7. No nonsense communication

You can read more about exactly what each area is and how progress will be measured either in the full document, which also includes detail around the business case for diversity and inclusivity, or in the overview document which gives you a brief outline of the plans. These can be found in attachment 6.

Communication of Policies and Procedures

All employees are made aware of our strategies, policies and procedures with respect to equal opportunities, diversity and inclusion, sustainability, performance, and harassment. These are also made available to all staff via our intranet and our human resources team.

In the event of a breach of our policies or a reason for complaint or grievance, we provide guidance for informal and formal resolution in our local Harassment and Bullying UK Policy. This also identifies the roles and responsibilities of our managers, our human resources team, and our staff.

Airtime

We have in place ‘Airtime’ a UK forum for staff communication and consultation. Airtime encourages us to influence our internal world, and enables us to work together to provide an environment which addresses our personal and professional aspirations.

Airtime meetings are held twice yearly as a forum for elected staff representatives to discuss internal changes. A record of each meeting is issued to all staff in the form of an Airtime Broadcast. The broadcasts are intended to engage staff and show them what issues are being considered. Staff can raise any concerns or issues they have with their elected regional representative. A regular (every other month) Airtime broadcast to UK staff helps to keep staff engaged with the Airtime team and feedback loop.

Airtime has a number of key principles:

- Enable leadership and elected staff representatives to exchange information and consult on possible changes and draft policies of significance.
- Enable ideas to be harvested from the body of the firm



through the staff representatives for the leadership to consider in making decisions on issues that significantly affect our professional lives.

- Improve the flow of information between all members of staff.

#### Training and Support

We provide in-house training via a full and varied programme of courses, with information available to all staff on our employee intranet. Specific individual training needs are identified as part of employees’ annual appraisals, and then included in their development plans. In addition, our graduates and apprentices participate in formal training programmes to achieve professional qualifications. Courses include: technical skills, diversity awareness training such as ‘Inclusive Leaders and Leadership’ and Gender Bias Awareness Training for recruiters. Mentoring and guidance is available for all staff. Within the UKIMEA region, 9.1% of management staff (grades 7 to 9) have completed diversity training. Our newly appointed EDI leader, Andrea Callendar, is currently working with the Global team on developing additional EDI training for all Arup employees.

#### Female Leaders

Within the UKIMEA region, Arup has 33.10% female employees as of March 2018, of which 20.94% of management positions (grades 7 to 9) are occupied by females. This is an increase from last year’s figure of 19.88%, and we are working towards further increasing these numbers over the coming years.

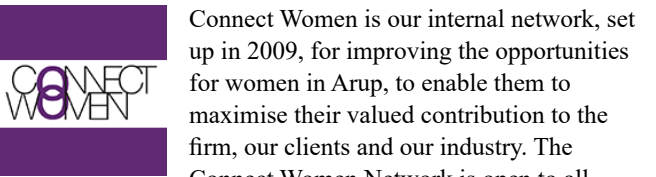
#### Women on the UKIMEA Board of Directors

Out of 17 UKIMEA board members, we currently have three who are female, and one woman serving as an officer. We continue to strive for greater equality and diversity throughout our business.

#### Number of women employed at all grades

The percentage of female staff as of March 2018 is 33.10% which is marginally higher than 32.53% in 2017.

#### Connect Women



Connect Women is our internal network, set up in 2009, for improving the opportunities for women in Arup, to enable them to maximise their valued contribution to the firm, our clients and our industry. The Connect Women Network is open to all

Arup employees (regardless of profession, position or sex) who support our aim of improving opportunities for women within our industry.

To mark International Women in Engineering Day on 23 June 2018, Connect Women London organised a panel led discussion on ‘Celebrating Technical Excellence’ in collaboration with the Women’s Engineering Society (WES). Speakers included Faith Wainwright, Pavlina Akritas, Chartered Chemical Engineer, Yasmin Ali, and renowned academic, Professor Dame Julia Higgins. The discussion explored the role that technical excellence plays for each of our speakers, with a lively discussion on career development for women in different industries.

Questions looked at whether women still need role models, how to get involved in outreach and media presence, issues affecting women’s career progression such as having a family, the lack of opportunities for flexible working, or other barriers – and how they might be overcome.

#### Connect Out



Connect Out is the firm’s lesbian, gay, bisexual and transgender (LGBT+) network and forum, set up in 2011, and is open to all employees (regardless of profession, position or sex). Connect Out advocates a work environment that respects, welcomes and

supports LGBT+ professionals, and empowers them to perform to their fullest potential and contribute to the greater goals of the firm.

Arup joined nine other companies from Building Equality to create the biggest engineering and construction industry presence ever at National Student Pride, aiming to attract LGBT+ students to apply to work in the industry. This was an excellent opportunity to speak with LGBT+ students and communicate Arup’s commitment to diversity and inclusion.



Arup staff at National Student Pride 2018

#### Connect Cultures



Set up in 2013, this network aims to celebrate and promote the benefits of cultural, ethnic and religious diversity in our workplace and

foster an inclusive and equal opportunity work environment that respects our individual differences and the value they can bring to the firm.

In October 2017, Arup hosted an event curated by award-winning architect Simone de Gale. The Celebrating Excellent Black Architects exhibition has been praised for showcasing the successes of a number of black architects worldwide, including Phil Freelon and Elsie Owusu OBE, through interview, images and audio.

The exhibition was launched at New London Architecture’s headquarters, as part of London Festival of Architecture, and has been exhibited at the Stephen Lawrence Charitable Trust and at Royal Institute of British Architects to participate in the celebrations of incoming President Ben Derbyshire’s inauguration. After its display at Arup, the exhibition material was submitted to the Black Cultural Archives to enhance their collections and for use in future exhibitions and further references.

#### Young Engineers, Apprentices and Graduates

In September 2017, we welcomed 224 new graduates and 70 apprentices into Arup UKIMEA region and hosted two welcome events held in Manchester and Warwick. This represented the largest intake ever to our Early Careers programmes, and a significant investment in the future of our organisation.

This year’s intake came from over 60 universities, comprise of 33 nationalities with roughly 50% male and female representation - making it our most diverse intake to date.

Like previous years, we incorporated both the Graduate Induction and Skills Week programme into one, bringing six discipline-specific skills weeks together in one venue. These skills weeks are important as Arup graduates are offered real responsibility on exciting projects from day one.

We also had a record number of apprentices join Arup (70) and take part in induction, group activities and technical workshops. After the initial induction, apprentices joined their new teams and began working on live projects straight away. Apprentices have the opportunity to work on a huge variety of projects and they provide a valuable contribution to the firm today, and well into the future.

#### Outcomes and Progress

##### Woman of the Year 2017



Dervilla Mitchell, UKIMEA Chair, was named Woman of the Year 2017 at the Building Magazine Awards.

This category recognises and rewards the stand out achievements of women working in construction and identifies positive role models who enhance the sector’s appeal to others.

Dervilla was recognised for opening up opportunities to other women in the industry, as well as for her personal achievements which have paved the way for generations of future engineers.

#### Arup achieves top scores in Achilles Audit



Arup London received six positive elements in Achilles (Building Confidence) Audit.

Achilles Building Confidence is an independent audit of an organisation’s

Safety, Health, Environment, Quality (SHEQ) management systems and Corporate Social Responsibility (CSR). This is a requirement on contracts for many of our UK construction clients. Performing well in this demonstrates our commitment to excellence in these areas and assists with winning work.

The annual Achilles Building Confidence audit was very successful with Arup getting no non-conformances as part of the two day supplier audit. We also received 6 positive elements:

- “The company demonstrated they were market leaders with the awards achieved during 2017.
- The company’s process chart for working in areas with live electrical services was an easy document for their operatives to understand.
- The company was accredited to the National Equality Standard.
- The company demonstrated their intellectual talent within their organisation to research solutions for the reduction of carbon and energy when designing the buildings.
- The company demonstrated the wealth of their human capital amongst the personnel in the reduction of use of materials and resources.
- The company demonstrated their ability to innovate to reduce use of water.”

#### Living Wage

Arup is a Living Wage employer, and was one of the first 1,000 employers to become fully accredited. This is consistent with our commitment to provide ‘reasonable prosperity’ to all our employees, which one of the goals identified in our founder’s Key Speech. That means we pay all our permanent employees above the relevant London or National Living Wage threshold, and we have an action plan in place to ensure our contractors are also paid a living wage.



### WomEng event hosted by Arup

Around 60 Engineering and Built Environment university students are selected annually from across South Africa to attend the WomEng Fellowship week.

As part of the Gold Sponsorship at the 2017 WomEng Fellowship Week, Arup staff hosted an exclusive evening with the delegates. Students are exposed to the working world and are equipped with business and life skills required to succeed in industry. The event highlights the social responsibility engineers, designers and planners hold to create better futures and come up with solutions to social problems. The evening kicked off with the Arup Futures Film to introduce the themes for the night - African Cities, Emerging Technologies and Infinite Possibilities.



Each group was provided with the Emerging Technologies Timeline and African Cities card sets produced by the Foresight team.

They were challenged to come up with innovative solutions to access to safe water and inadequate housing problems in African cities, incorporating two future technologies into their solutions. Models were built using craft materials and solutions were pitched to the Arup team in three minutes and winners were selected per category. The remainder of the evening was left for networking and speed mentoring where staff encouraged the delegates to raise their future aspirations.

### Nine Arup engineers named in Top 50 Women in Engineering (WE50)

Nine Arupians have been highlighted as the UK’s “most influential female engineers” according to The Telegraph newspaper – more than any other firm. The annual Top 50 Women in Engineering (WE50) list was published to coincide with International Women in Engineering Day on 23 June 2018. This year’s list focused on returners and transfers; those who have succeeded in the industry after taking a break or making a career switch.



UKIMEA Chair, Dervilla Mitchell, said promoting the achievements and highlighting the influence of female engineers is more important than ever. *“We know that a more diverse workforce brings better results for our clients. Having more female engineers listed than any other firm in a year that focuses on returners and transfers is a significant milestone for us – showing how we attract, retain and nurture talent.”*

### Tenancy Deposit Loan Programme



In early 2017, Arup signed up to support the Mayor of London’s Fifty Thousand Homes campaign. Arup already follows a number of the commitments outlined in the pledge across the UK including:

- An accredited Living Wage Employer
- Provision of financial education webinars for graduates and apprentices
- Offering season ticket and bicycle loans to help with the cost of travel for staff with increasingly expensive commutes

In support of our continued commitment to the Mayor’s campaign, we launched a new programme in October 2017 for tenancy deposit loans to support the challenge of housing costs - not just in London but across the UK. This is an interest free personal loan to staff, designed to facilitate rental deposit payments provided these are registered as part of a formal Tenancy Deposit Scheme.

In addition, the existing season ticket and bicycle loans have been enhanced so that these benefits can be accessed within three months of joining the firm.



We are taking steps to minimise carbon emissions associated with our projects and operations, and endeavour to prevent pollution within the scope of our activities.

### Our Commitment

Sustainability is fundamental to our thinking at Arup, helping us to deliver on our mission to ‘shape a better world.’ Our offices are the second biggest contributor to Arup’s carbon footprint, after travel. We are committed to taking a resource efficient, sustainable approach to the way we run our offices.

Responsibility for sustainability at UKIMEA Regional Board level, is held by Ian Rogers (Director). Our Foresight and Innovation team is dedicated to managing the firm’s global innovation programme, gathering and evaluating emerging technologies, including green technologies, and sharing these experiences with Arup offices and our clients around the world. Every year we invest a percentage of our profits to fund this research.

As a firm of consultants, the biggest impact we can have on the environment is through our work for our clients. We try to embed sustainability in everything that we do - in the way we run our business, our projects, and our physical impacts on the external environment. We help our clients to face the challenges of sustainability by investing in our passion for turning ideas into tangible tools and methodologies.

We extend our influence at every level, from individual buildings and large portfolio owners to cities and governments. Through our many partnerships and committee memberships we disseminate best practice sustainable design. We strive to deliver better solutions for our clients and create a lasting and positive legacy for future generations.

### Our Approach

#### Key Speech

Sir Ove Arup established the firm over 60 years ago with the principles of ‘total design’ - the integration of the design process and the interdependence of all the professions. He also championed the social value of innovation and the humanitarian purpose of good design. Today we understand this as a commitment to sustainability. You can view the Key Speech here: [https://www.arup.com/perspectives/publications/speeches-and-lectures/section/ove-arup-key-speech?query=key speech](https://www.arup.com/perspectives/publications/speeches-and-lectures/section/ove-arup-key-speech?query=key%20speech)

#### Sustainability Policy Statement

<p><b>Sustainability Policy</b></p> <p><b>Mission</b></p> <p>To shape a better world</p> <p><b>Objectives</b></p> <p>The firm will implement practices that promote economic security, social betterment and environmental stewardship and will strive for continuous improvement of performance in these areas.</p> <p>To deliver this, the firm aims to:</p> <ul style="list-style-type: none"><li>– set a sustainability strategy for the firm</li><li>– be a leader in sustainable development in areas relevant to its business</li><li>– work with its clients to prevent, promote and develop sustainable business outcomes, promote sustainable practices</li><li>– use its skills and influence to improve the built environment and to maintain the integrity and quality of the natural and cultural environment</li><li>– hold its performance accountable to its staff through objective measurement, report on its sustainability performance, and achievements</li><li>– operate within a management system that is registered as meeting the requirements of ISO 14001</li></ul> <p><b>Outcomes</b></p> <p>In meeting these objectives, the firm will:</p> <p><b>For its core business</b></p> <ul style="list-style-type: none"><li>– create valuable and other opportunities that relate to its environmental aspects</li><li>– provide value to clients by building open to cooperation for integrated design and a holistic approach to projects</li><li>– deliver projects recognised for their sustainability credentials, in line with client expectations</li><li>– evaluate projects with respect to their sustainability risks and opportunities and, where appropriate, work with the client to deliver a more sustainable outcome</li><li>– achieve performance that creates the firm’s economic, environmental and financial vitality</li></ul> <p>ARUP</p>	<p><b>For its people</b></p> <ul style="list-style-type: none"><li>– employ and retain staff who have a high degree of education and expertise in sustainability for all disciplines involved</li><li>– provide ongoing education and training for all staff on sustainability issues relevant to the firm’s business</li><li>– support innovative approaches to the implementation of sustainability strategies on projects</li></ul> <p><b>For its facilities</b></p> <ul style="list-style-type: none"><li>– endeavour to prevent pollution</li><li>– aim to use resources efficiently and to minimise waste, usage of water, energy and other consumables</li><li>– implement a strategy to move towards minimising carbon emissions in its operations</li><li>– implement a strategy for the firm to move towards sustainable procurement of the goods and services used in its operations</li></ul> <p><b>For its external relationships</b></p> <ul style="list-style-type: none"><li>– engage with organisations that practice sustainability and that enable the exchange of ideas and the promotion of sustainability leadership across its business</li><li>– implement a strategy to work on community projects that address sustainability goals</li></ul> <p>Mikaela Ratten Arup Group Sustainability Director</p> <p>ARUP</p>
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Arup’s Sustainability Policy states that the firm will implement practices that promote economic security, social betterment and environmental stewardship and will strive for continuous improvement of performance in these areas. You can view the UKIMEA Environmental - Sustainability Policy in attachment 9.

### Global Sustainability Strategy

This sets out our sustainability expectations from the top levels of the firm. It defines our approach and responsibilities, and it supports us to maintain our position of leadership in this area. It states that “We remain committed to placing sustainability at the heart of all that we do, helping us in our mission to shape a better world.”

### UKIMEA Regional Sustainability Plan 2016/18



The Region Sustainability Plan (RSP) responds to the firm’s Sustainability Policy, the Arup Strategy and the UKIMEA Region Strategy. In addition to supporting these policies and strategies, the plan is also intended to support our commitments made

during the 2015 UN Climate Change Conference in Paris

(CoP21). The plan reflects increasingly active engagement by the UKIMEA Board with the sustainability agenda.

The plan sets out our priorities, risks and opportunities for the Region. Ultimately we must embed sustainability into everything we do and this plan is a key part of that.

This RSP is focussed around five key priorities:

1. Improve the integration of sustainability into projects
2. Improve how we communicate our sustainability performance to staff and clients
3. Improve the way we integrate sustainability into our internal



teams’ operations

4. Encourage local office support through the Resilience and Legacy Network
5. Improve the wellbeing and environmental performance of our facilities

To coordinate and monitor delivery of our RSP, the UKIMEA Board continues to appoint the RSP team, led by the region’s Sustainability Director Ian Rogers and coordinated by the UKIMEA Sustainability Manager, Andy Sheppard.

UKIMEA Regional Sustainability Report 2016/17



We strive to embed sustainable practices into our own operations. Each year, we look to see where change is needed to improve our performance, and how we can modify our approach. This ongoing learning gives us first-hand experience to share with our clients and informs our work with them.

Energy, water, waste, paper and carbon figures exclude our Africa offices where data collection remains challenging. A copy of the 2017-18 UKIMEA Regional Sustainability Report is available for all staff, and a copy can be viewed in attachment 10.

Arup Management System (AMS)

The Arup Management System embraces Health and Safety, Quality and Environmental Management. This provides the procedures, processes, and documentation to complete our projects. The AMS has achieved a “single certificate” to ISO 9001, ISO 14001 and OHSAS 18001 covering all UK offices. The AMS captures project sustainability objectives and is used to monitor and record achievements and outstanding actions.

Environmental Management System (EMS)

A strategic approach has been taken to the implementation of our EMS within Arup. Implementation occurs at the group level, with our offices seeking certification locally to the requirements of ISO 14001:2004. While all of the environmental impacts of our activities require management, the assessment of each activity and consequent impact is used as a guide to prioritise actions, via risk assessments through the EMS. These assessments result in significant ratings, calculated by considering the likelihood, severity and legal implications of environmental impacts.

Audits and Reviews of Sustainability Performance

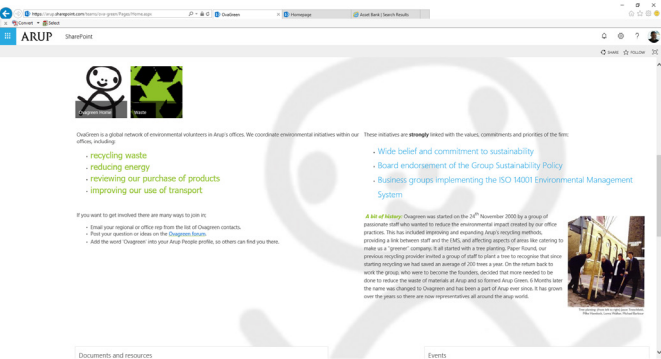
We carry out annual internal system audits, regular project audits and an annual management review to ensure compliance with our internal processes and management of our environmental aspects. Our environmental audit process contributes to ongoing monitoring and improvement of environmentally sustainable performance.

SusNet

SusNet is Arup’s intranet site for sustainability skills, guidelines, tools and technologies. The site is a gateway for all sustainability skills in Arup. It provides access to information across a range of other sites to cover all aspects of sustainability at a business and project level. There is also a forum where people can ask sustainability/environmental questions and rapidly receive responses from experts within Arup.

OvaGreen

OvaGreen is a growing global network of environmental volunteers in Arup’s offices. They coordinate environmental initiatives within our offices, including: campaigns, climate week events, recycling waste, reducing energy, reviewing our purchase of products and improving our use of transport.



Screenshot of the OvaGreen home page on the Arup staff intranet

Activities and Implementation

Global Sustainability Strategy

This strategy commits us to bringing our sustainability approach and expertise to our projects, across all regions and disciplines. Our aim is to ultimately ‘shape a better world,’ develop our collaborations with clients for more sustainable design solutions, review and improve sustainability training. We will continue to strive to improve Arup facilities and operations’ resource-efficiency, embody our vision and values, ‘walk the talk,’ and strengthen our involvement in all communities in which we operate.

Specific performance targets are established against KPIs to gauge our progress. We gather data for these metrics on a global and regional level, enabling us to review progress and adjust our actions for ongoing performance improvement. We report our performance publicly in our yearly UKIMEA Sustainability Report.

We recognise that our firm’s largest sustainability impact and influence is through our business (our projects). One of our priority areas for 2016-18 is to improve the integration of sustainability into projects by delivering projects that not only comply with local regulations, but achieve more sustainable outcomes in line with client expectations.

Arup and the WELL Building Standard



Arup has a number of employees worldwide who are Provisional WELL Accredited Professionals.

The WELL Building Standard is a new green rating system that explores relationships between health, wellbeing

and the built environment. The Standard is managed and administered by the WELL Building Institute and has synergies with both LEED and the Living Building Challenge.

Version 1.0 of the Standard is optimised for commercial and institutional buildings and can be applied to three project type: new construction and major renovations; tenant improvements; and shell and core developments. Future refinements will address the specific requirements of multifamily residences, retail and restaurants, sports facilities and convention centers, schools, and healthcare facilities.

Existing Buildings

Around 47% of the UK’s energy usage and approximately 33% of green house gas (GHG) emissions is attributed to the built environment, while 10% of emissions derive from heating buildings alone. Arup is committed to working to reduce the impact of these assets on their local communities, and has extensive experience of assisting the property sector to embrace sustainability and transform their property portfolios. This includes the retrofitting of existing assets and the development of strategies to reduce energy use and change behaviours. We have produced existing buildings survival strategy guides to help owners plan for the future of their buildings. These guides set out and explain research on market and legislative challenges, strategies for revitalising assets, initiatives and ideas for prioritising actions and case studies.

Asset MAP

Our building retrofitting services are underpinned by our proprietary software tool Asset MAP, which brings together architectural, engineering and financial risk analysis for the evaluation of the economic and environmental improvement potential of a client’s building or property portfolio. This helps us to advise clients on where best to focus any physical interventions.

A year in partnership with C40 Cities Climate Leadership Group



We continue to work with the C40 to deliver pioneering research that demonstrates the invaluable role of cities in reaching global climate change targets. Our findings have been widely endorsed and reported.

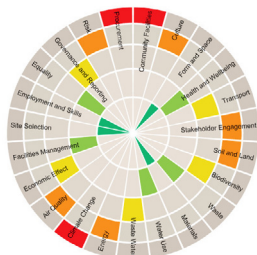
In December 2016, we launched a major new piece of research, entitled ‘Deadline 2020: How cities will get the job done’ to coincide with the C40 Summit of Mayors in Mexico. The report, produced by our Energy and Climate Change team, provides a detailed analysis of the contribution that the global C40 cities need to make to convert the agreement from aspiration into reality. This includes the need for cities to reduce emissions from an annual average of above 5 tCO<sub>2</sub>e per citizen to around 2.9 tCO<sub>2</sub>e per citizen by 2030.

Running from 30 Nov to 2 Dec, the C40 summit focuses on the critical role that cities need to play, and the steps they need to take to meet the objectives of the ‘Paris Agreement’ signed at CoP21 in 2015.

The report is the latest in a series of research projects delivered by Arup and C40 as part of our \$2m partnership.



SPeAR® Sustainable Project Appraisal Routine



Our SPeAR® software based tool relates to environmental rating systems including LEED®, BREEAM and CEEQUAL. It was developed by Arup’s software and sustainability experts to help us support our clients’ sustainability goals. The tool encompasses quantitative and qualitative appraisal and is based on 23 core indicators. This is presented graphically using a traffic light type system to indicate performance against key themes. A tabulated summary of the input data is also generated, ensuring that the process is robust and auditable. It can assist with improving the social, economical and environmental performance of projects, expedite planning approvals, and reduce project risks and costs. SPeAR® output is available in a range of languages including Chinese, German, Italian, Polish and Spanish.

ASPIRE (A Sustainability Poverty and Infrastructure Routine for Evaluation).

This software based tool was created to provide organisations with an analytical framework that comprehensively addresses three ‘pillars’ of sustainability (environment, society, economics) and uniquely recognises institutions as a fourth critical dimension in developing country contexts. It uses over 90 detailed indicators to ensure that users ask the right questions and consider all the critical issues. It is built on the SPeAR® platform, and has been developed by Arup International Development in collaboration with Engineers Against Poverty.

CEEQUAL the Sustainability Assessment, Rating and Award Scheme for Civil Engineering

Arup is a CEEQUAL Project Partner and Technical Advisory Group member. We have been involved with each stage in the design development of CEEQUAL and since 2003, we have assessed £16 billion in projects. We have 3 of 28 UK verifiers within Arup and 29 trained assessors. We routinely achieve ‘Excellent’ awards where we lead the assessment and have so far achieved over 96% in awards.

These awards include Bristol Water’s proposed 9,400 mega-litre Cheddar Reservoir Two project and the primary foul drainage for the Olympic Park.

Communication of Policies and Procedures

All employees are made aware of our strategies, policies and procedures with respect to sustainability. These are also made available to all staff via our intranet and our environmental and sustainability teams.

Training

Sustainability training in the UKIMEA region is provided through Arup University. A range of training options are available including Designing Sustainable Buildings e-learning modules, classroom based courses such as the Sustainability Workshop for Project Leaders and Sustainable Cities. More in-depth and specialist masters courses are also offered including Smart Cities and Energy Futures and Transitions. To complement formal sustainability training, informal and ad-hoc lunch-time talks and events are organised at office level to share best practice and sustainability learning from projects.

The total number of hours of sustainability training of UKIMEA staff was 5,763, equating to 1.3 hours of sustainability training per employee per year.

Forums

In addition to training, we encourage regular sharing of sustainability best practice across offices and projects. We have a number of intranet based staff communication forums for the sharing of ideas and knowledge including: Ecology, Environmental, Food and Agriculture, Landscaping and Green Infrastructure, Living Roofs, and OvaGreen.

Sustainable Office Environments

We have been monitoring and reporting our carbon footprint since 2007. Our greatest source of carbon emissions is business travel, followed closely by emissions from indirect electricity generation to power our facilities. To ensure a safe and healthy workplace for our staff, we will maintain high standards of health and safety at our own offices, and require our clients to do likewise, ensuring the protection of staff and their wellbeing whilst working on site.

Arup promotes multiple sustainability initiatives within the office environment focusing on reuse, recycling, energy consumption and behavioural change. We encourage our staff to consider their environmental impact and how we can work together sustainably and set global and regional targets to improve our facilities’ sustainability performance. Our RSP target is that 100% of our resource data will be monitored via Credit 360. Our sustainable procurement vision outlines our approach to procuring products and services.

We work closely with first-tier suppliers and encourage them to adopt sustainable behaviours. We require them to have their own environmental policies and targets, thereby influencing overall supply chain performance. Examples include: minimising deliveries of stationary and other materials, and purchasing uniforms made from recycled materials. Examples of sustainable initiatives are given overleaf.

Office Energy Use and Supply

Arup is a participant in the Carbon Reduction Commitment Energy Efficiency Scheme and the Energy Saving Opportunity Scheme, and as a result, we consistently monitor our office energy use to determine where further reductions might be possible.

As part of our ongoing efforts to reduce carbon emissions per employee, an Energy Management System (EnMS) has been introduced to help manage energy usage in ten of our offices in the UK. Data is managed through an online automatic monitoring and targeting (AM&T) software platform. The system enables us to proactively capture, monitor, trend and report resource consumption and the energy performance of our buildings.

Energy use data for our UK offices is made available to staff via the annual sustainability report. It can also be accessed using the Credit 360 software to generate an office specific report on all our sustainability metrics.

Video and Conferencing

Since 2001, we have invested in, and made extensive use of video conferencing and telephone conferencing. This enables effective communication while reducing the need for excessive travel. Our global use of desktop video conference calls (via Skype for Business) continues to increase and we predict that desktop VC will be the main driver for face-to-face meetings in the future, alongside our use of meeting room VC.

Follow You Printing

We continue to utilise our existing print management software in the UK which reduces wasted prints by automatically deleting queued print jobs that are not collected within 24 hours. All print

jobs are set-up by default to print double-sided and monochrome as an additional measure to prevent waste and unnecessary use of print resources.



Follow you printing resources in use at Arup

Night Watchman

This power management solution controls power and shuts down connected desktop computers at a scheduled time, preventing any computers left on after hours from consuming power overnight.

Bicycle Facilities

Arup has cycle storage with changing rooms and showers at all main offices in London. There is an active employee community of cyclists called BUG (Bicycle User Group). Since 2008, Arup has offered a cycle-to-work scheme in the UK, via our partners Cyclescheme, to encourage employees to enter a tax efficient bicycle rental agreement for cycling to work.

Since 2008/2009, there have been 1,361 participants enrolled on the scheme, and a total of £1.2m spent on bikes obtained through the scheme. Cyclescheme promotes the Arup scheme as an

example of a successful long-running initiative with continually high engagement.

Stationery From “Green/Core” Products

Arup has a core list of stationary and office supplies from recycled, environmentally friendly and sustainable materials, which encourages the business to identify with the economic and environmental sustainability pillars.

Office Waste and Recycling

Our offices follow the principles of waste prevention, reduction, re-use, recycling/composting and energy recovery. We apply waste segregation within all offices in the UKIMEA region, and 90% of office waste was diverted from landfill from 1 April 2017 to 31 March 2018. A further 60% of office waste was recycled and/or composted during this period.

We work with BPR who convert our waste to energy, and we have a well publicised and organised waste policy and colour coded containers (as shown above) which clearly identify the correct waste locations. Many items are sorted in our recycling room for reuse, including PCs and steel toe capped boots (reused in Africa), and other items which are donated to charities.

Other

Further environmentally responsible initiatives include using all FSC sourced materials for furniture and paper, and procuring fair trade or fairer trade food items in our offices. We work with all our suppliers, particularly in catering, to reduce packaging. An example is our fruit suppliers who now deliver in re-used plastic crates rather than cardboard boxes and paper wrapping. We also employ rainwater harvesting in our London offices.



In the UK, our successful Green Car scheme is still going strong. Our fleet’s average CO<sub>2</sub> emission of 87g/km makes ours the most efficient salary sacrifice scheme on Hitachi’s books. That is in large part due to the 120 g/km CO<sub>2</sub> emission cap we chose for the scheme, as we wanted this to be a genuinely sustainable and environmentally-friendly benefit. We have recently reviewed the scheme and further reduced the cap to 75 g/km CO<sub>2</sub> emission.

### Outcome and Progress

#### UKIMEA Sustainability Report

Our annual UKIMEA Sustainability Report provides a snapshot of Arup’s performance for the previous financial year, highlighting some of the work our teams have carried out within those regions.

The report showcases some of the many ways in which we have influenced the sustainability of our clients’ projects. Case studies demonstrate the breadth of what sustainability means across a spectrum of sectors and provides examples of how we have delivered improved environmental performance and wellbeing for our clients.

The report also provides performance results which demonstrates our commitment to sustainability and promotes the fact that we are living by our values. Our 2017/18 report has been published and can be viewed in attachment 10.

#### Sustainable Offices

100% of Arup UKIMEA region staff are working in offices with an EMS certified to ISO14001. Our annual UVDB Verify Management System Evaluation, by Achilles Information Ltd, scored 100% for Health & Safety, 100% for Environment and 100% for Quality in November 2017.

The Onsite Assessment scores for November 2017 were also

100% for Health and Safety, Environment and Quality.

Our global target for total paper consumption per FTE is a reduction of 15% compared to 2011/12 paper use, which was 36kg per employee. Continued prevalence of relying on digital media has led to a 20% reduction in the amount of paper each employee uses this reporting year. For the financial year 2016/2017, paper use in the UKIMEA was 16kg per employee which is lower than the set global target of 30.6 kg per employee.

Our global target for greenhouse gas emissions is a maximum of 3.0 tonnes of CO<sub>2</sub> equivalent [tCO<sub>2</sub>e ] per employee per year. For the financial year 2016/17 in the UKIMEA region, emissions associated with both facilities and travel fell by 5.5% per employee and a 1.4% reduction in carbon emissions overall. The UKIMEA emissions fell to 3.1 [tCO<sub>2</sub>e ] per employee.”

#### Global Research Challenge 2018

Launched in 2011, the Global Research Challenge is a firm-wide initiative inviting academia, industry and our people to propose short-term, collaborative research projects to solve some of the most intricate challenges facing our world.

Smart drainage systems, using machine learning and artificial intelligence to monitor the health of bridges, and transforming cities into incubators of biodiversity are just some of the winning ideas in this year’s Global Research Challenge.

After over 180 applications, eight finalists have been selected and will each receive up to £50,000 in funding over a period of one-to-two years to take their research forward.

Every Global Research Challenge provides key themes and in 2018 these include finding roles for artificial intelligence in the design and engineering of the built environment, and regenerative design solutions to help reduce the environmental impacts of urbanisation.

#### ClimateCare visit the London office



On 12 October, ClimateCare visited our London office to showcase their new energy efficient cookstove, raising awareness of the collaborative project between Arup and ClimateCare which will bring 20,000 ‘clean cooking’ cookstoves to communities in Kenya over a four year period.

A relatively unknown fact is that household air pollution is a bigger cause of fatalities in Kenya than malaria. With this project, Arup and ClimateCare are contributing to a number of sustainable goals including reducing carbon emissions.

During the two hour lunchtime event, Oliver Forster from ClimateCare engaged with a number of staff across all sectors with different interests in the project.

*“We are delighted to be working with Arup to develop access to clean cooking in Greater Nairobi. Over the next 12 months Arup and ClimateCare are targeting the distribution of 3,000 clean cookstoves in underserved communities, which will save families money on fuel and make a measured reduction in the carbon emissions from cooking.”*  
Oliver Forster, ClimateCare

#### Mark Fletcher honoured at the Society for the Environment Awards



Our Global Water Leader and Arup Fellow, Mark Fletcher, has been awarded Honorary Fellow of the Society for the Environment, a body which is responsible for the registration of environmental professionals.

Mark was presented with the award at an event hosted at our London office, held on World Environment Day on 5 June. Speaking after receiving the award, Mark said: *“I felt very humbled and also very proud to receive it as an Arupian and an Arup Fellow, and be listed alongside the likes of Sir Crispin Tickell, Lord Smith of Finsbury, Jonathan Porritt and George Monbiot.”*

The event, hosted by the Environmental Consulting team, included a range of presentations providing insight into environmental issues and case studies, and provided an opportunity to raise awareness for World Environment Day, the global theme of which was plastic pollution.

#### Tackling London’s polluted air, UK

Our London office has recently completed a project to improve air quality in London by developing a plan for London’s largest and most ambitious neighbourhood enhancement area (NEA). Working closely with Transport for London, local government and local residents, our team brought together our expertise in air quality, transport, landscape, planning, freight logistics, ecology, city economics and sustainability.

We also introduced specific measures which can be implemented to improve air quality and the urban environment. The cost of the measures were calculated to enable funding sources to be identified. The measures and vision would be applicable in many cities around the world where air quality is a problem. By bringing together our experts in different fields we can provide a holistic approach to solving the problem of air pollution.

Reclaimed timber and milk bottles: Circular economy product range of storage and desk tidy products

Arup has collaborated with Goldfinger Factory ([www.goldfingerfactory.com](http://www.goldfingerfactory.com)) on a circular economy product range. Our AT+R Product Designers designed ‘GOLBORNE’, a family of versatile storage and desk tidy products that combines Arup’s waste HDPE milk bottles with reclaimed timber. The collaboration is the result of a scoping study undertaken by Arup on behalf of The Crown Estate to identify how dry operational waste from London’s Regent Street could be reused as a low impact resource for new upcycled products.

The waste material used of the range is intentionally non-explicit. Stephen Philips said: *“We can’t assume people will buy products on the basis they are sustainable. The look, feel and function of the design, economics and supply chain model have to stack up”.*

The GOLBORNE range offers an alternative approach to the manufacture of functional and beautiful products whilst

providing less advantaged people with a platform to make a living from upcycling in the future. The range will be launched during The London Design Festival at Goldfinger Factory’s showroom and cafe in West London.

#### Shaping our future with the Sustainable Development Goals



Last year, we made a commitment to align our work with the ambitions of the United Nation’s SDGs. As part of this, a new ‘learning burst’ is now available to all staff via our dedicated Learning & Development site ‘Moodle’, which introduces the UN SDGs. Launching this new learning burst, Jo da Silva, Global Sustainable Development Leader, said: *“Our collective aim is to shape a better world. The SDGs set out what ‘better’ looks like, helping us to focus and identify the business opportunities that contribute to a sustainable future – for all.”*





Arup staff taking part in the Ecuador earthquake response, 2018



We are committed to maintaining our record of zero incidents of bribery and corruption.

Our Commitment

### ARUP

#### Ethical Conduct Policy

Our values and commitment to business integrity stem from a desire to act honourably and with integrity in all our business dealings. We have a strong sense of responsibility to treat people respectfully and we maintain ethical business standards in all the markets in which we operate.

**Aims**

Treat our people with honesty and fairness. Enable them to behave honourably and act with integrity in all our business dealings, building relationships as independent advisors and trusted professionals.

Implement best practice and raise awareness of the ethical standards we require of our people.

**We will**

Maintain a Code of Conduct and training programme for all our people.

Maintain procedures so that we do not engage in unethical conduct or illegal practices.

Implement systems that support our duty of confidentiality and respect privacy in all our business relationships.

Support any member of staff who has legitimate concerns to challenge unethical behaviour and respond appropriately.

Participate in appropriate industry initiatives to promote business integrity.

Work with clients, partners and collaborators with due consideration that their ethical commitments are consistent with our own.

Keep our systems and procedures under regular review to confirm that they remain relevant and proportionate.

**Governance**

This policy is set by the Group Board and implemented across all Arup operations through rules, procedures and guidance. It is reviewed and approved annually, or more frequently if appropriate.

The Ethics Director acts for Arup in developing a plan to enable us to reach the aims set out in this policy while fulfilling applicable legal, regulatory and other requirements.

*“...we should act honourably in our dealings with our own and other people.”*

Ove Arup, 1970

*Dervilla Mitchell*

Dervilla Mitchell  
Ethics Director  
April 2018

Our Ethical Conduct Policy, defines our core objectives:

- commit to treating our people with honesty and fairness by acting honourably and with integrity in all our business dealings;
- implement best practice and raise awareness of the ethical standards we require of our people;
- provide training, guidance, information as may be necessary

- to personnel at all levels;
- maintain procedures so that we do not engage in unethical conduct or illegal practices;
- implement systems that support our duty of confidentiality and respect privacy in all our business relationships;
- support any member of staff who has legitimate concerns to challenge unethical behaviour and respond appropriately;
- participate in appropriate industry initiatives to promote business integrity;
- work with clients, partners and collaborators with due consideration that their ethical commitments are consistent with our own; and
- keep our systems and procedures under regular review to confirm that they remain relevant and proportionate.

This policy is set by the Group Board and implemented across all Arup operations through rules, procedures and guidance. It is reviewed and approved annually, or more frequently if appropriate.

Our Ethics Director, Dervilla Mitchell, is responsible for developing a plan to enable us to reach the aims set out in this policy while fulfilling applicable legal, regulatory and other requirements.

Our Approach

Key Speech

This speech was written and delivered by our founder Sir Ove Arup in 1970, and defines who we are, and sets our core values and guiding principles. The Key Speech is the high-level framework that guides behaviour within the firm. One of the six core principles is “*...we should act honourably in our dealings with our own and other people.*”

Our global Ethics Code of Practice aligns with the Bribery Act 2010, and appropriate policy level statements are supported by local procedures as necessary. All employees receive a copy of the Key Speech as part of their induction. You can view the Key Speech here: <https://www.arup.com/en/publications/Speeches-and-Lectures/Section/Ove-Arups-Key-Speech>

Ovocode

Ovocode sets out our conditions of employment for all staff. This reinforces our Global Conduct and Performance Codes of Practice and Ethical Standards Policy.

Member of Anti-Corruption Organisations

Arup is a member of the World Economic Forum – Partnering Against Corruption Initiative (PACI) and the UK Anti-Corruption Forum.

Working Globally

As an international consultancy, the anti-bribery laws of many jurisdictions apply to our business. On this basis we have developed extensive policies/codes of practice and procedures to ensure compliance globally throughout Arup.

Ethics Global Code of Practice

This sets out our ethical values and is intended to provide guidance on acceptable business practice to ensure that these values, principles and standards are being met across a range of areas including: financial inducements, third parties, gifts and entertainment, competition, confidentiality, conduct and performance at work, client activity, conflict of interest, political contributions and asking questions and raising concerns. We believe that our Ethical Standards Policy and Ethics Code of Practice and Procedure are in line with the Bribery Act 2010, the FCAP, the US Foreign Corrupt Practices Act 1977 (FCAP) and



other relevant legislation. Please see attachment 11.

Political Donations and Financial Inducements

Arup does not make political donations. Arup will not, in any circumstances make or offer to make a payment or transfer anything of value for the purposes of improperly obtaining or retaining business or any other improper business advantage.

Arup does not permit ‘facilitation’ payments made to expedite or guarantee government services that we are legally entitled to (e.g. connection of water, customs clearances) as these are prohibited in most countries.

Conduct and Performance - Ethics Code of Practice

Conduct and Performance is a part of our Ethics Code of Practice and states that:

*“You are expected to apply due skill, care and diligence in the services that you provide for clients. You should, at all times, work to the best of your ability.*

*It is your personal responsibility to acquaint yourself with the legal standards and restrictions that are applicable to the location in which you are working and to comply with these in all respects.”* Please see attachment 12.

Anti-corruption Links

Our UK intranet, Digital Workspace, provides guidance on the Bribery Act 2010, from the UK Anti-corruption Forum.

Anti-Bribery and Due Diligence Check List

Our intranet area provides guidance on issues to consider when working on a project including anti-corruption provisions in our contract terms, and the appointment of partners or sub-

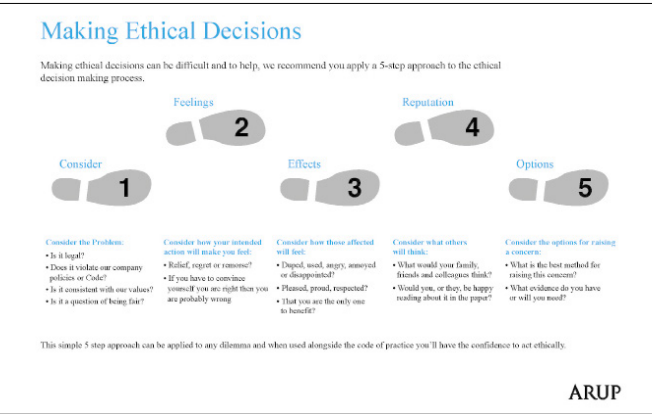
consultants.

Communication of our Policy, Code and Procedure

The Arup Ethical Standards Policy and Ethics Code of Practice is communicated to all members of staff, is freely available via our employee intranet and is referred to in the Ethical Standards training that all staff are required to complete.

Ethics Guidance on Making Ethical Decisions

This gives a five step process to assist staff with making ethical decisions. Please see attachment 12.



Partners and Sub consultants

Arup is committed to undertaking appropriate due diligence on all agents and joint venture partners, and where appropriate, sub consultants that we work with. The Arup standard for sub-consultancy agreements requires our sub-consultants to comply with all applicable laws and regulations relating to anti-bribery and anti-corruption. They must have and maintain in place, throughout the term of their appointment, their own policies and

procedures to ensure compliance. This includes requirements for them to have anti-corruption programmes, client, project and partner ownership and funding arrangements. The complete document forms the basis of risk assessments and covers the country, client, project, partners, and agents associated with any proposed project.

Disciplinary Procedure

Arup Disciplinary Procedures are region specific, and designed to be supportive and encourage improvements in individual conduct and performance. Disciplinary action follows for individuals who abuse Arup’s policies and procedures. Please see attachment 14 for a copy of the UK procedures.

Activities and Implementation

Global Ethics Code of Practice and Procedure

As described above, this procedure provides practical guidance on acceptable behaviour across a range of areas.

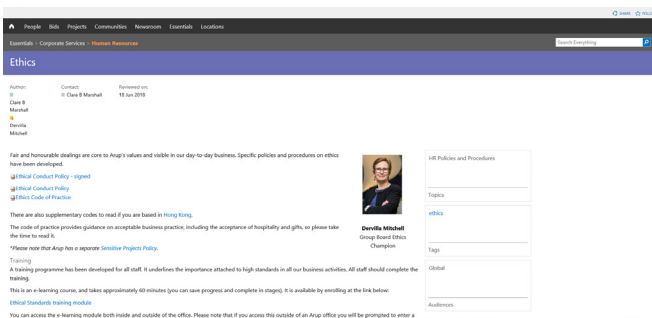
Conflicts of Interest

Arup’s philosophy is based on acting honourably in our dealings with our own and other people. Our Ethical Standards Policy addresses the responsibility of each of our employees with regard to the fiduciary duties they owe.

Communication of Policies and Procedures

All employees are made aware of our strategies, policies and procedures with respect to ethics and anti-corruption. These are also made available to all staff via our intranet and our human resources team.

In the event of a breach of our policies, or a reason for complaint, we provide guidance for resolution in our Global Ethics Code of Practice and Procedure.



Arup Ethics Intranet Page

Communications Channels for Reporting Concerns

Transparency

Security

Necessity

Respect

Arup has a dedicated intranet area for ethics, which is kept up to date with the latest relevant policies and procedures.

Our Global Ethics Code of Practice and Procedure includes guidance for staff on how to raise queries and concerns. Arup commits to investigate all

potential breaches of this policy, that are reported in good faith, responsibly. This includes the following: *“If you have a concern or suspect that a breach of this policy has occurred or may occur, you have a duty to report these concerns.”* Reporting can be undertaken anonymously, although staff are encouraged to identify themselves to enable a full investigation. All questions or reported suspected breaches can also be directed through the staff member’s Group Leader in the first instance, but where this is not possible or appropriate, employees may choose to contact Dervilla Mitchell, the nominated member of the Arup Group Board.

This also identifies the roles and responsibilities of our managers, our human resources team, and our staff.

Global Board Representative/Champions



Dervilla Mitchell, Group Board Director, is the firm’s global champion responsible for ethical business practices. She is supported by regional champions and works with them and others to create and approve policies and procedures and to continue to promote communications and education in this area.

Training and Development

All staff are required to complete an Ethical Standards e-learning module which addresses the requirements of the Bribery Act 2010.

Privacy Policy

A global policy and supporting measures, setting out our objectives to meet data privacy laws, was launched in July 2016.

These objectives include being fair and reasonable in the collection and use of personal information, respecting the legal rights of individuals and ensuring all personal information is held securely. The policy covers all instances of personal data, whether staff data, client data or personal data used for project work.

Data privacy laws are becoming more stringent in many jurisdictions. Mishandled data can have serious repercussions for organisations, including financial penalties, damaged reputation and loss of trust. It is therefore important that we all understand what personal data is and what we have to do to handle it correctly.

To support this, our Privacy Policy is complemented by a number of documents and training modules that provide a framework for us all to process personal data in the right way. A copy of our Privacy Policy can be viewed in attachment 14.

Outcomes and Progress

We can confirm that in the last three years we have not been the subject of a formal investigation by the Equality and Human Rights Commission or an equivalent body, on the grounds of unlawful discrimination.

Arup has not been involved in any legal cases, rulings, or other events related to bribery or corruption. There are zero offences for corruption or bribery in the firm.

Our company financial accounts are subjected to external audit every year. These audits are to confirm that the financial reporting framework that has been applied in their preparation is applicable by law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice). This audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error.





Sir Ove Arup on Kingsgate Bridge, Durham, November 1963



We actively seek opportunities to deliver positive social value by partnering with like-minded organisations to deliver sustainable development outcomes.

### Our Commitment

Maintaining a ‘humanitarian attitude’ in our work is a core principle within all sectors of Arup and was a focus of the Key Speech, delivered by our founder, Sir Ove Arup, to the company in 1970. His commitment was to create a human and friendly organisation that maintains a “*social conscience*” and carries with it “*a wish to do socially useful work and join hands with others fighting for the same values.*” In fact, one of the six core values in the Key Speech is “*social usefulness*”.

Our planet is facing many interrelated critical challenges than ever before – from the effects of climate change and natural disasters to mass migration, rapid and uncontrolled urbanisation, poverty and social inequality, environmental degradation and loss of natural resources and cultural heritage.

Arup International Development group (Arup ID) have been established as a specialist group within Arup since 2010. Our aim is to contribute to safer, more resilient, sustainable and inclusive communities and human settlements in emerging economies and fragile contexts, where the impacts of rapid unplanned urbanisation, resource scarcity, social inequalities, environmental degradation, and climate change are felt most acutely. We have been working in Sub-Saharan, South and South-East Asia, Latin America and the Caribbean, Australia, and Small Island Developing States (SIDS).

The work we do aligns with the core values and framework given in the Key Speech and we believe contributes to Arup’s overall aim “*to shape a better world*” by delivering sustainable, resilient and inclusive development projects in emerging markets and fragile contexts.

### Our Approach

Arup ID have a deep understanding of and capacity to work with international development processes in fragile and emerging geographies, and are now established as a trusted and valued partner in the development and humanitarian sector. Our work on resilience and social infrastructure has been globally recognised.

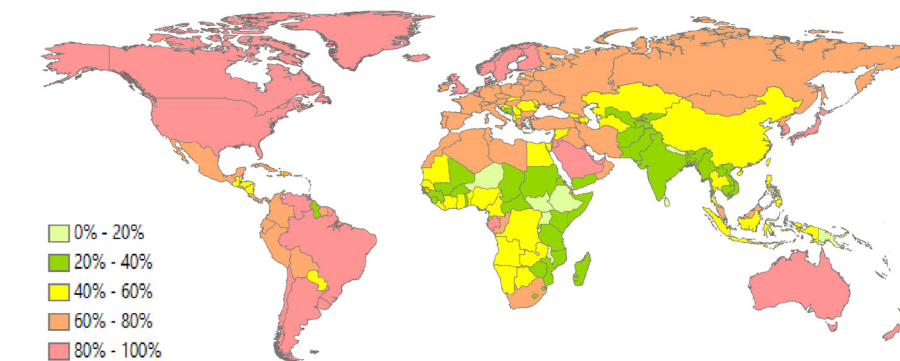
We constantly pursue opportunities to design and deliver positive social value in collaboration with key drivers of sustainable development and leading humanitarian organisations committed to serve the most vulnerable communities in the world. We have delivered over 100 projects in more than 50 countries across Africa, South Asia, South-East Asia, Australia, Latin America and the Caribbean, and SIDS, in partnership with:

- International Federation of Red Cross;
- Oxfam;
- Habitat for Humanity;
- World Bank;
- Asian Development Bank;
- The Rockefeller Foundation;
- The Aga Khan Foundation; and
- UNOPS, amongst others.

Together we have helped improve the quality, resilience and sustainability of infrastructure projects; increase well-being and resilience of human settlements; respond effectively to humanitarian crises and natural disasters; and build climate change resilience for vulnerable communities.

*“An enormous volume of capital is expected to flow into urban development in the coming decades, particularly in South Asia and sub-Saharan Africa. Some 60 per cent of the area expected to be urbanized by 2030 remains to be built. Much of the growth will occur in countries with weak capacities to ensure risk-sensitive urban development.”*

UN Global Risk Assessment Report on DRR, 2015.



Levels of Urbanisation 2014  
Data Source: Based on UN Dept of Economic and Social Affairs, Population Division (2014). World Urbanisation Prospects.





Our approach provides a privileged not for profit access to the best world's expertise of Arup in the built environment to a platform of partners engaged in development and humanitarian action in emerging and fragile contexts across the globe. Arup supports these countries to successfully address the challenges they face whilst enabling growth, by following a risk-sensitive, resilient and inclusive development path which capitalises on our ability to solve complex problems in the built environment, through the nexus between our people-centred values and our multi-disciplinary, systems-led approach to development.

Through our experience and expertise we seek to influence our partners to embed quality into their development work in the built environment. We advocate for and support the achievement of international agreements relevant to the built environment, such as the United Nations Sustainable Development Goals (UN SDGs), the Paris Declaration on Climate Change (2015), the Sendai Framework for Disaster Risk Reduction (2015), and the New Urban Agenda (2016).

Arup has made a commitment to support the UN SDGs through the work that we do. Specifically, Arup ID have been applying the UN SDG framework on our projects to set aspirations and targets, focus our efforts, and identify focus areas where we believe we will have the greatest impact. The following five goals were identified of priority relevance, and will be the focus of our impact measurement, ensuring interrelations between all

UN SDGs:

- **Goal 4** – Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- **Goal 6** – Ensure availability and sustainable management of water and sanitation for all
- **Goal 9** – Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation
- **Goal 11** – Make cities and human settlements inclusive, safe, resilient and sustainable
- **Goal 13** - Take urgent action to combat climate change and its impacts

Other SDGs rated highly in the mapping process include:

- Good Health & Well-being (Goal 3)
- Reduced Inequalities (Goal 10)
- Partnership for the Goals (Goal 17)
- Strengthening Institutions (Goal 16)

#### Thematic Focus Areas and Offering

At the core of our work, we place the people and the communities exposed to the unwanted consequences of urbanisation, the negative effects of climate change, large-scale migrations, and poverty in emerging and fragile contexts, in both development and humanitarian situations. In collaboration with our partners, our work focuses on two key thematic areas, and three respective sub-themes, which are aligned to the global priorities manifested in the SDGs:

#### 1. Resilient and inclusive urban systems

- Urban resilience measuring and planning
- Climate resilient and sustainable cities and human settlements

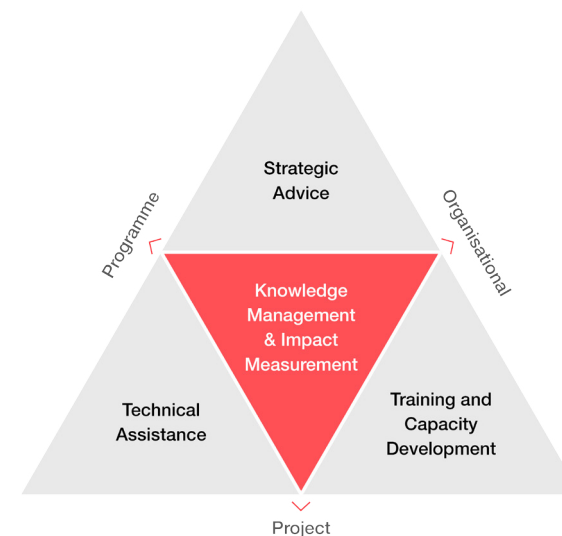
- Spatial development and urban regeneration
- #### 2. Resilient critical infrastructure and basic services
- Resilient critical infrastructure systems
  - Safe and inclusive social infrastructure
  - Basic essential service' systems

With resilience as the overall lens of our work, we also consider three key cross-cutting topics as critical in the geographies where we operate. These are:

- Climate & environmental action
- Risk reduction & management
- Social inclusion and socio-economic development.



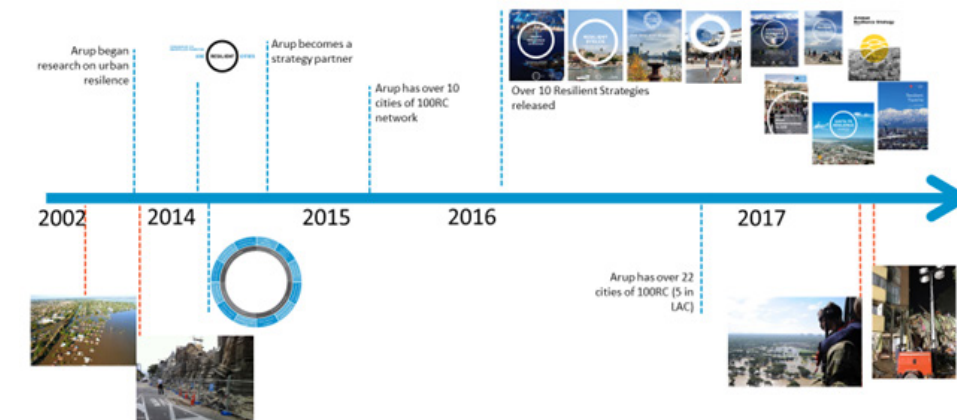
We provide high quality **strategic and policy advice**, practical **technical assistance and advice** – including (in humanitarian contexts), **training and capacity building, supported by effective project management**, to our partners to help them get the best results at organisational, programme and project level.



**Knowledge management and learning, and digital innovation** are at the heart of what we do. We actively disseminate new learning and knowledge gained through our project work with the wider development sector, to build technical and institutional capacity and enhance the effectiveness and efficiency of urban systems and processes.

#### Strategic Advice

We provide strategic advice to our clients and partners, to help them meet their strategic objectives and achieve their outcomes; from high-level strategic planning to physical interventions and programme management.



For instance, within the **100 Resilient Cities initiative** we have supported 23 cities across the globe to develop inclusive and integrated city resilience strategies, which are informing their urban plans and future investments, considering resilience aspects across socio-economic, infrastructure, and ecological systems.



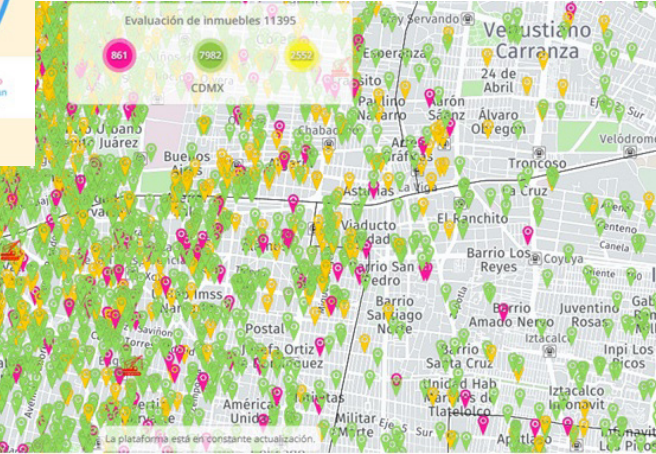
Technical Assistance and Advice

We provide technical expertise and knowledge across the complex urban systems, from assessment and evaluation, resilient strategies development and delivery, spatial (urban and regional) planning, sustainable building and infrastructure design, to water and waste services enhanced delivery and management.

For instance, we have partnered with “Salvaticasa.mx” to support the humanitarian response to the 2017 earthquake in Mexico City, deploying over 50 structural engineers worldwide to undertake initial inspections for damaged buildings, assessing over 1,000 damaged structures.



Application developed by Arup in collaboration with “Salvaticasa.mx” to assess damaged buildings in occasion of the 2017 earthquake in Mexico City



Training and Capacity Building

We develop and deliver training material and research insights to strengthen knowledge and capacity of clients and partners in the areas of urban resilience, climate change, disaster risk reduction and management, and resilient infrastructure.

For instance, with the Humanitarian Innovation Fund and in collaboration with Oxfam, CIRIA, Water, Engineering and Development Centre (WEDC), Loughborough University, Illman Young and Environmental Protection Group (EPG), we are producing a toolkit and guidance document for surface water management for practitioners working in humanitarian contexts, particularly in Refugee and IDP camp.



Workshop with humanitarian and surface water experts as part of our work with the Humanitarian Innovation Fund producing a toolkit for surface water management in humanitarian contexts

Over the last year we have partnered with the following organisations:

UN Organisation	NGOs	International Development Banks and Trust funds	Foundations	Multi-bilateral donors	Social Enterprises	Alliances	Academia
International Labour Organisation (ILO)	Engineers Against Poverty (EAP)	Asian Development Bank (ADB)	Lloyds Register Foundation	UK Department for International Development (DfID)	MASS Design Group	Cities Alliance	University College London
UN Office for Project Services (UNOPS)	Oxfam	The World Bank	Rockefeller Foundation	Department of Australia Prime Minister and Cabinet	Social Development Direct (SDD)	Stichting Bangladesh Accord	Bristol Univesity
International Organisation for Migration (IOM)	Plan International	Humanitarian Innovation Fund		UK Foreign & Commonwealth Office			International Institute for Environment and Development (IIED)
	British Red Cross	Nordic Climate Facility					King’s College London
	Save the Children						Loughborough University Water, Engineering and Development Centre (WEDC)
	The Sabre Charitable Trust						
	Salvaticasa Mexico						



Our people

Our team provides a wide range of technical skills in the built environment, including structural engineering, architecture, spatial planning, infrastructure design, climate change adaptation and disaster risk reduction. This breadth is combined with local contextual knowledge across our focus geographies and thematic areas. In addition, our team includes 12 nationalities speaking 11 languages.

We also work with other teams across Arup – such as Geo-technics, Cities, Climate Change and Energy, Integrated City Planning and City Economics, Infrastructure – to enable us to provide a holistic, integrated, multi-intra-disciplinary approach focussed on performance of systems and social outcomes.



The Arup International Development team

Leadership Team

Jo da Silva - Founder and Director, Arup ID



Jo da Silva is an Arup Fellow and Global Leader for City Resilience. She studied Engineering at Cambridge University and received a Doctor of Technology (Hons) from Coventry University. Jo’s work over the last ten years has focussed on understanding and measuring resilience, which led to her developing the

Resilience Shift programme; a global initiative to catalyse resilience between critical infrastructure. She has worked extensively on post-disaster recovery and reconstruction projects, and on major community-led infrastructure projects in Asia, Africa and Europe. Jo has played a key role in resilience projects such as:

- 100 Resilient Cities
- The City Resilience Index
- The Asian Cities Climate Change Resilience Network
- Urban ARK
- Future Cities, Africa

Callum Newman - Associate Director, Arup ID



Callum joined Arup in 2018, bringing more than two decades of experience in International Development. He has worked in Azerbaijan (four years), Myanmar (four years), Nepal (six years) and Mozambique (six years) leading programmes in the areas of education, public health, nutrition, water, sanitation, child protection, and

livelihoods. Callum has managed programmes funded by the UK, US and Australian governments as well as several UN agencies, and has led the strategy development and business planning for a number of large organisations. Callum is in the final stages of gaining a Masters of Philosophy and already holds a BA and an MBA.

Sara Candiracci - Associate Director, Arup ID








Joining Arup in 2017, Sara is an Urban Planner with 16 years’ experience in International Development, working in Africa, Latin America and Asia, in the field of sustainable urban development and resilience, urban governance, urban planning, WASH (Water, Sanitation and Hygiene), slum upgrading and cultural heritage preservation. She holds a

PhD on heritage-led urban planning, focusing her dissertation on the value of heritage as a driver for sustainable development in Africa, with Maputo as a case study. She has worked with:

- UN-Habitat
- Inter-American Development Bank,
- Municipal Council of Maputo for the World Bank
- several NGOs

Sara has a deep understanding of urban dynamics and governance systems, and the ability to articulate implementation strategies that enable innovation. She is experienced in managing multi-disciplinary projects and teams, working with different stakeholders (national and local authorities, private sector, development banks, academia, civil society, local communities).



Area and Principles	Related Arup ID work	
<div>Human Rights<div></div></div> <p>Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights.</p> <p>Principle 2: Make sure that they are not complicit in human rights abuses.</p>	Arup ID subscribes to the wider humanitarian standards of the firm with respect, integrity and equality central to the way we work and the work we do. We work to understand and address the needs of some of the most vulnerable in society and inclusivity is central to Arup ID’s strategy:	
		Our research as part of the DfID-funded Urban ARK research project examined the relationship between large capital infrastructure projects and risk for local communities in East African Cities. It is part of a wider portfolio of work focused on inclusive infrastructure.
	  	<p><b>Gender Responsive Public Services:</b> Pathways to Equitable Economic Growth in Cities. In 2017 we undertook research with Cities Alliance examining how local interventions aimed at supporting gender-responsive delivery of key public services can contribute to the economic empowerment and social inclusion of groups and individuals who are often marginalized and vulnerable.</p> <p><b>NCF 5:</b> Climate Adaptation Solutions for the Urban Poor: Supported by the Nordic Climate Facility, we are working with Plan International and with local communities in an informal settlement in Dhaka to develop and implement actions to increase local resilience to the multiple impacts of climate change. Our work is focusing on the community Dhaka’s Rail Line Slum and Match Colony but with a view to replicate this in other informal settlements in Dhaka and beyond.</p>



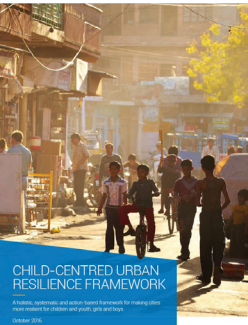
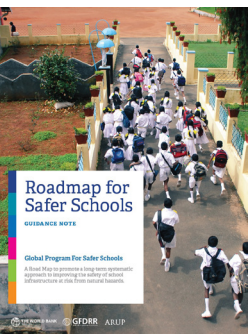
Activities and implementation

Over the last year Arup ID have been operating in 19 countries across, Africa, South Asia, Latin America and the Caribbean and SIDS, in collaboration with development and humanitarian organisations, in the areas of climate resilient urban development, inclusive social infrastructure, disaster risk reduction and reconstruction, pro-poor economic and social development, and institutional guidance and reform.





Project Alignment with Global Compact



In addition to sharing the wider values, safeguards and practices of the firm, Arup ID also aligns to the Principles of the Global Compact via a range of projects which contribute to the Global Compact’s goals.

A few select projects are outlined in the following section.

Area and Principles	Related Arup ID work	
<div>Labour<div></div></div> <p>Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.</p> <p>Principle 4: the elimination of all forms of forced and compulsory labour.</p> <p>Principle 5: the effective abolition of child labour.</p> <p>Principle 6: the elimination of discrimination in respect of employment and occupation.</p>	We work to improve the conditions of persons working in challenging situations to try to ensure that they can experience safe and healthy working environments.	
		In Dhaka, Bangladesh after the Rana Plaza factory collapse in 2013 we undertook a comprehensive technical assessment of factory structural safety for the International Labor Organization. We have subsequently trained local engineers, <b>supporting ILO capacity building activities to improve local garment industry working conditions.</b>
		We have developed the <b>Child-Centred Urban Resilience Framework</b> with Plan International providing guidance on the strategic actions that will contribute to sustaining life, mobilising the community, making safe places and promoting integration of children and young people in cities.
		We have contributed to a range of programmes under the theme of education – working to ensure that quality educational facilities are available to all children. This includes the World Bank <b>Global Programme for Safer Schools</b> which involves comprehensive mapping of stakeholders and institutional, financial and technical capacity in target countries to ensure that subsequent investment in school safety addresses the root of the problems impeding national school safety, not just surface symptoms.



Area and Principles	Related Arup ID work	
<div>Environment</div> <div></div> <div>Principle 7: Businesses should support a precautionary approach to environmental challenges.</div> <div>Principle 8: undertake initiatives to promote greater environmental responsibility.</div> <div>Principle 9: encourage the development and diffusion of environmentally friendly technologies.</div>	Our work consistently makes the connection between environmental responsibility and protection and the current and future resilience and prosperity of the world’s cities and communities. We have developed several frameworks which highlight environmental sustainability and multi-scalar and multi-system connectivity in addressing this challenge.	
		<b>Future Cities Africa – Future Proofing Cities</b> – Arup’s <b>Future Proofing City studies</b> capture our work in nine cities in four African countries – Uganda, Ethiopia, Ghana, and Mozambique. Using innovative tools to analyse the institutional and physical capacity, and environmental risks in each city, we aim to help cities better understand the specific challenges and opportunities they are facing and promote sustainable development. A common theme is how threats may be mitigated by strong environmental protection and management that allows natural resources to benefit economic development and wellbeing.
		We are currently developing the <b>City Water Resilience</b> Framework supported by the Rockefeller Foundation. This seeks to enable a holistic understanding of a city’s water network, the wider water system in which it sits, related stakeholders and interdependencies with other systems. This promotes an understanding of sustainable water resource management, balanced against immediate challenges.
		<b>IOM Flood Resistant Shelter Research</b> - Arup were commissioned by International Organization for Migration (IOM) to undertake a study of shelter agency responses in Pakistan following the 2014 Floods. This research evaluated shelter interventions against a range of criteria including flood resilience and structural performance, cost, building comfort and lighting levels, and the carbon footprint and environmental impact of shelters.

Area and Principles	Related Arup ID work	
<div>Anti-corruption</div> <div></div> <div>Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.</div>	Arup ID comply with the wider safeguards that our firm has in place to prevent corruption. Corruption and mismanagement are key obstacles that can impede the development objectives at various levels of government in many countries and Arup ID addresses this in some key projects:	
		<p>The City Resilience Index (CRI) was developed by Arup with the support of the Rockefeller Foundation and is the first comprehensive tool for cities to understand and assess their resilience, enhancing their ability to build sound strategies and plans for a strong future. The CRI tool generates a resilience profile that reveals a city’s specific strengths and weaknesses through assessing its current state against 12 goals and 52 indicators.</p> <p>Anti-corruption and good governance are key components of the CRI, also informing related programs such as 100 Resilient Cities. Qualitative and quantitative examination of city transparency and trustworthiness have been ongoing throughout 2017 and 2018 as part of holistic resilience assessments taking place in cities across the world.</p>



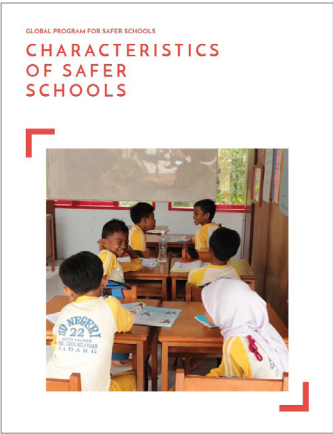
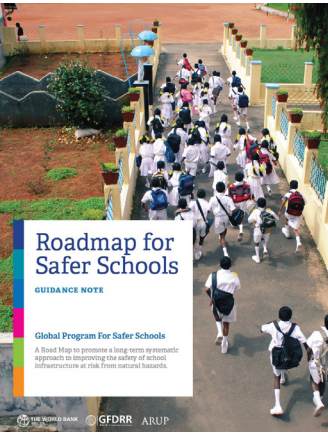
Project Impact

Global Program for Safer Schools (GPSS)

Arup’s work on GPSS is helping improve the safety of schools by tackling the underlying issues which impede performance.

Since 2014, with the World Bank, Arup has:

- Developed key concept reports ‘The Characteristics of Safer Schools’; and ‘The Safer Schools Roadmap and Recovery and Reconstruction Roadmap’; which provides strategic global and country advice for investment in building safe schools, with evidence from research in Afghanistan, Mozambique, Nepal, Dominican Republic, amongst others.
- Program reports have been developed based on field missions to disaster prone countries (including Afghanistan, Armenia, Indonesia, Mongolia, Mozambique, Samoa and Tonga), to carry out a holistic contextual diagnosis of education infrastructure.
- Provided Post Disaster Technical Assistance in Vanuatu, following Tropical Cyclone Pam.
- Contributed through the Steering Group in partnership with GFDRR, Save the Children, and UNESCO to the ‘Towards Safer School Construction Guide’. This guide is for development and humanitarian organizations, and governments to demonstrate how community based approaches can be integrated throughout the planning, design, construction, and operation processes.



Key concept reports have provided strategic global and country advice for investment

The Resilience Shift

In its first year, the Resilience Shift has established a baseline understanding of how resilience is currently seen in engineering practice, based on a combination of research commissions and agenda-setting industry stocktaking consultations.

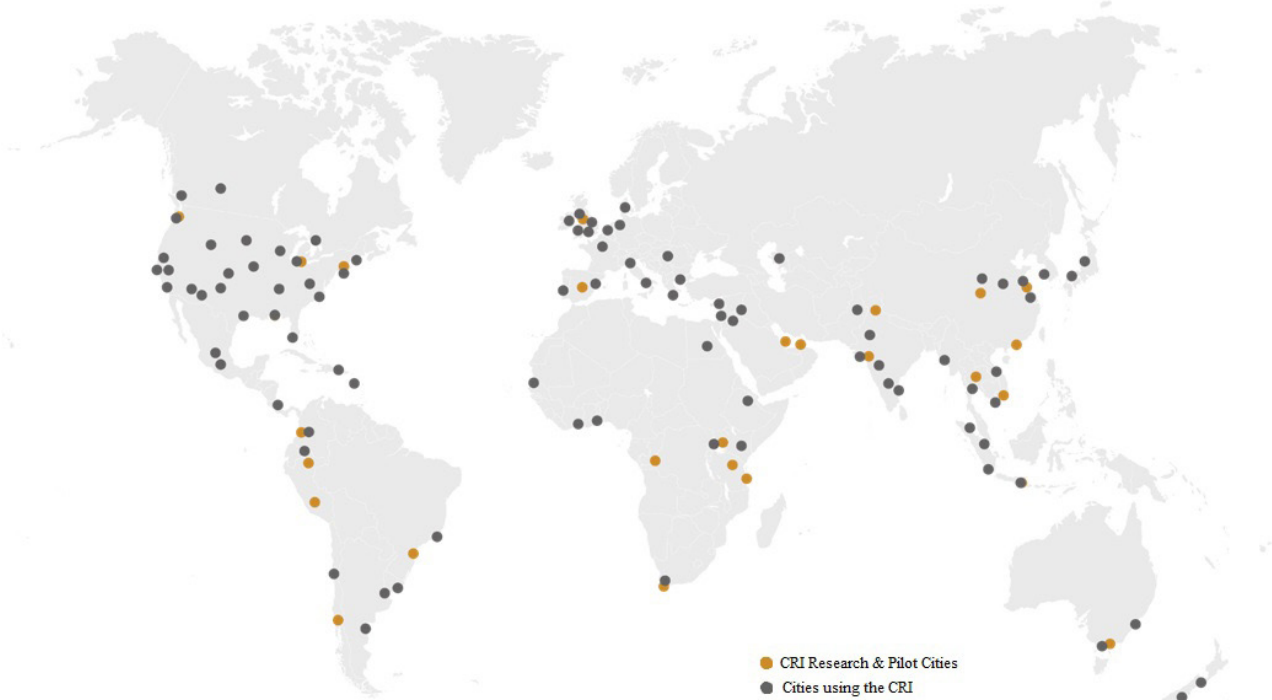
Since the launch of the Resilience Shift website at the end of 2017 there have been 15,526 page views.

The City Resilience Index (CRI)

The CRI has been helping cities globally to understand and measure their resilience.

This year has seen the scaling up of the City Resilience Framework. The following impacts have been made to date:

- 130 (approx.) known cities using the Framework including cities within the 100RC network, 25 cities in Vietnam.
- 34 cities measuring resilience using CRI metrics
- 26 Known initiatives influenced by CRI knowledge and tools
- 110+ Pending applications from cities on the CRI online platform.
- 15+ Partners collaborated with globally
- 3000+ users accessing CRI resources via the online platform



City Resilience Index engagement helps cities understand and measure their resilience



### 100 Resilient Cities

Through 100RC we are helping cities develop strategies to strengthen their resilience to a range of shocks and stresses.

- Arup is currently in the process of completing resilience strategies for 23 different cities,
- We have developed a range of knowledge products and tools which have been used throughout the strategy, and
- We have undertaken systematic evaluation of city challenges as part of the strategy process.



### City Water Resilience Framework (CWRF)

CWRF is helping cities to understand and improve their water resilience.

- In its first year three primary research missions have also been completed in Amman, Mexico City and Miami County.

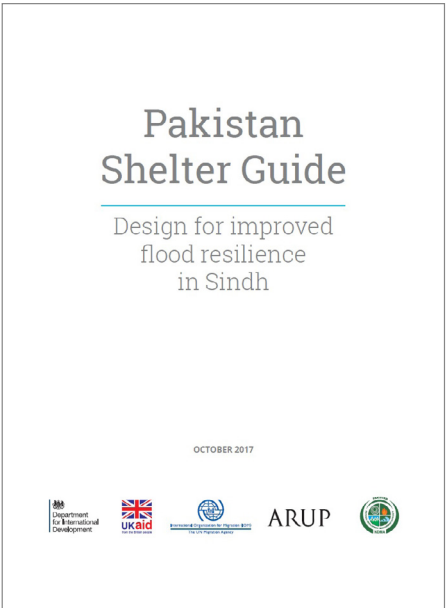
### Climate Adaptation Solutions for the Urban Poor in Bangladesh

In collaboration with Plan International, through the Nordic Climate Facility, we are developing and disseminating in Bangladesh effective and affordable models for climate adaptation accessible to the poor urban communities in Dhaka.



### Flood Resilient Shelter Guidance Pakistan

A best practice construction guide supported by the Pakistan National Government is now in place to inform coordinated best practice in any future shelter response.



### Awards



In 2017 Jo da Silva, Director of Arup ID and Arup Fellow, was awarded The Institution of Structural Engineers’ Gold Medal by the Institution of Structural Engineers. The Medal was awarded to recognise the outstanding leadership she has provided as both a structural and humanitarian engineer, and for her distinguished and cross-sectoral work on urban resilience.

### Contributions to Conferences and events

In the last year, Arup ID team members have attended and partaken in a broad variety of conference and events including:

Lloyd’s Register Foundation International Conference 2018 – Resilience tools and approaches workshop, London, May 2018.

Earlier this year The Resilience Shift team hosted a high energy workshop attended by insurance actors, academia and leading industry experts involved in the resilience of infrastructure. The session used a value chain approach to explore how tools, approaches and frameworks can create opportunities to deliver resilience value for critical infrastructure, drawing on the fresh perspectives and insights of the Lloyd’s Register Foundation grants community.

The team also attended the AI for Infrastructure Monitoring, a Joint Workshop by the Alan Turing Institute and EPSRC ENCORE Network and iBUILD, “Closing the Gap: Local Infrastructure Business Models to Support Inclusive Growth” as part of wider resilience shift activities to establish connections with leading thinkers in the field of infrastructure resilience.

### World Water Week, Stockholm, August 2017

Arup ID attended this as part of the Arup water team, organizing the ‘Young Professionals Day event’ as well as partaking in an intergenerational debate in relation to water reuse being the solutions to the world’s water scarcity challenge.



Multi-disciplinary panel enabled holistic consideration of key issues

### IIED/IRC/DfID - Crises in cities and cities in crisis: towards a collaborative urban response



Arup both attended and co-led a session at this international conference held at University College London. The session used Arup materials, the City Resilience Index Indicator cards, and Shock and Stress Cards, to take attendees through a participatory exercise, discussing holistic resilience solutions for a given city. The session was well-attended and received positive feedback.

### Steering Groups

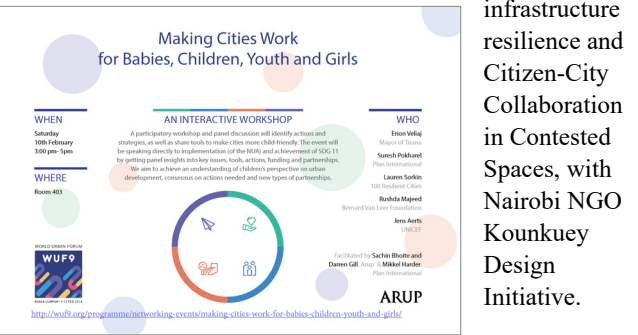
The team are also active members of a variety of steering groups including:

### World Urban Forum 9 (WUF)

Arup ID presented on several topics including the role of urban governance in resilience building and child-friendly cities, Kuala Lumpur, in February 2018. These events were well attended and received from a diversified audience.

The first event Making Cities Work for Babies, Children, Youth and Girls included a key speech from the Mayor of Tirana, as well as sharing knowledge and developing collaboration with participants and event partners Plan International, UNICEF and Bernard Van Leer Foundation.

Arup ID team members also contributed to panels with UN-Habitat and UNOPS on the role of the private sector in



Promoting consideration of diverse city residents and users, aligned to UN SDG 11

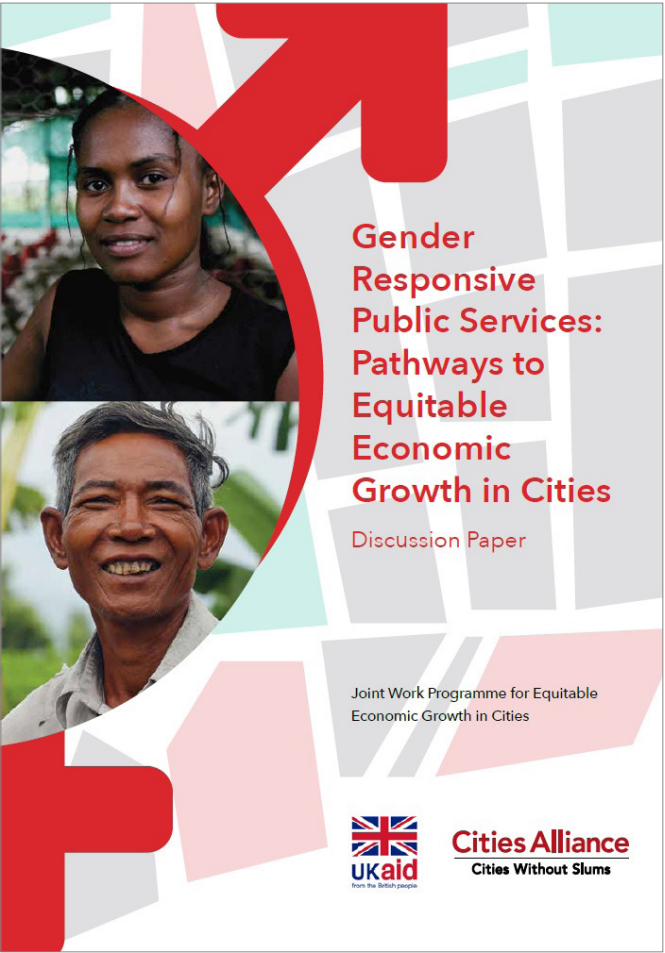


Shelter Meeting, Geneva

In October 2017, Arup presented a scoping review of surface water management guidance for humanitarian crises, and its work with IOM to provide a design guide for improved flood resilience in Pakistan. The meeting provided an opportunity to showcase and disseminate the latter and develop feedback and engage stakeholders for the ongoing development of the former. During this event we also presented the early stages of our HIF Surface Water Management in Humanitarian Contexts project enabling us to get further feedback from stakeholders.

Urban ARK (Africa Risk Knowledge) Year III Meeting: Connecting work to add value and impact

Arup presented our contribution to the Urban ARK research program - Risk beyond the red line: Urban Risk and Capital Projects in Kenya, University of Cape Town, Cape Town, January 2018. The idea of the ‘red line’ of the project boundary and the need for developers and regulators to think holistically beyond this, for inclusive infrastructure, provided a strong message which was revisited and repeated by other attendees throughout the conference.



“Humanitarianism also implies a social conscience, a wish to do socially useful work, and to join hands with others fighting for the same values.” Sir Ove Arup.

Our Commitment

As a firm, we aim to deliver a programme of Community Engagement (CE) activities that is inclusive, integrated, inspiring and impactful. Experience tells us that we can make the greatest impact when we offer our expertise and skills through pro-bono work to charitable partners rather than (or in addition to) simply giving cash. Our CE objectives for the next few years have been outlined in our recently published CE Global 3-Year Plan 2018-21 (see attachment 15).

In 2017-18, we invested approximately £3.1m in delivering over 170 projects across the globe. Our 2018-19 Community Engagement programme is now open with an approved budget of £4 million split across five regional Local Community Engagement Funds:

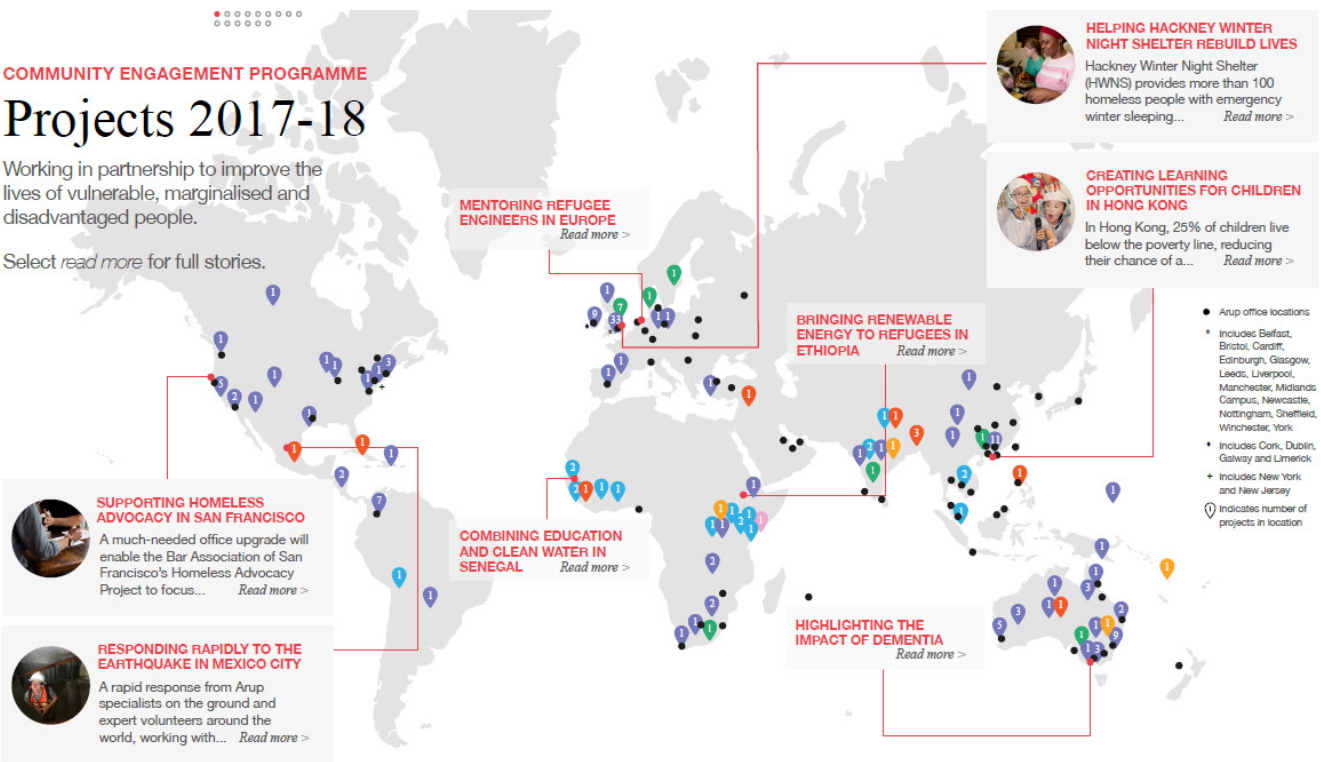
- 1. Development Fund
- 2. Disaster Response and Recovery
- 3. Global Challenge
- 4. Education
- 5. Carbon Reduction

Everyday, our work is helping to regenerate neighbourhoods, forge new physical and social infrastructure and transform lives for the better. Ove Arup established the firm to be “an organisation which is human and friendly” and one that carries with it “a wish to do socially useful work and to join hands with others fighting for the same values.”

The focus of our community engagement activities are strongly related to the sustainability agenda, with themes such as water (WASH and environmental resources), clean energy, education and shelter (social well-being).

Arup considers charitable causes that relate closely to Arup’s business and our mission to “shape a better world” and either:

- Serve the community in the areas where Arup offices are located;
- alleviate poverty through supporting the economic, environmental and social development of developing countries;
- save lives, alleviate suffering and maintain and protect human dignity during and in the aftermath of emergencies;
- improve access to education and training in our fields of activity, across the many related disciplines of design and engineering;
- support efforts to meet the United Nations’ 17 Sustainable Development Goals; and
- qualify for special consideration.







Our Approach

Our approach to Community Engagement is based on a framework that was introduced in April 2015, and now has a stronger, more defined presence in the firm - encouraging more people to initiate and take part in projects, fundraising and smaller one-off activities such as speaking at schools. This tighter focus is also helping our organisation to achieve better outcomes for those we seek to help.

It would be impossible to report on all of the great Community Engagement work our people do. So we have chosen to highlight a small selection of stories from the 155 projects undertaken during 2017.

These projects have one thing in common: they are driven by Arup employees’ desire to do more with their expertise than just advance their careers or grow our business. They want to contribute to less privileged communities. They want to shape a better world. The Community Engagement programme gives them a coordinated way of making a positive difference.

With specific funds dedicated to defined areas of activity - from Local Engagement to Disaster Response and Recovery - it’s now easier for people to get the support and funding they need from the firm for their projects.

*“Fund managers co-operate closely to ensure that each project is directed towards the most suitable fund. This ensures the team as a whole can provide a cohesive and seamless service to support and fund projects put forward by staff.”*  
Padraig Coakley, Europe Local Community Engagement Fund Manager

As a result, the total amount recorded on Community Engagement activities has risen 50% in 2017-18 to £2.4m. Our people give their own time too, spending at least 9,300 additional unpaid hours on Community Engagement projects

totalling over £500,000 of time. In addition to the rewards of delivering socially impactful work, our staff also gain valuable skills and experience.

In developing this framework we have avoided unnecessary bureaucracy as it allows us to structure our projects so that we can deploy our expertise to help people more efficiently and effectively.

Although we have much to celebrate this year, we also have exciting plans to develop the programme. This includes improving the way we measure the impact of projects so we know exactly where we can make the greatest difference by helping even more people.

In May 2017, we launched our Global Challenge after asking Arup staff which UN Development Goals they most wanted to see the firm support. As a result, we will invest £5m over the next five years in projects that support the goals of clean water and sanitation, and affordable and clean energy.

Activities and implementation

Here is a sample of some of our Community Engagement activities in the last financial year:

Global Challenge 2018: helping to further the UN Sustainable Development Goals

As part of its Community Engagement programme, our firm has committed to a five-year Global Challenge where we work with partners to align with the UN’s Sustainable Development Goals (SDGs).

Of the 44 ideas submitted to the programme, nine projects have already been selected and are underway, ranging from solar-refrigeration for dairy farmers in Sri Lanka to water purification in rural China. These specific projects were selected in response to a call for proposals contributing to clean water and sanitation (SDG 6), and affordable, clean energy (SDG 7), and were chosen as they have potential to be rolled out at a large scale. The teams delivering these nine projects, brought together our people and their external partners at a workshop designed to develop their ideas, help deliver their projects and look at how the teams could improve collaboration to increase their impact.

The team working with British Red Cross to provide effective handwashing units in post-disaster situations have just returned from a visit to the Kyangwali refugee settlements in Uganda. Tom Norton, who is based in the Operations Consulting team in London and took part in the visit, said: *“We want to help aid agencies use handwashing to reduce the spread of diseases like cholera, pneumonia and diarrhoea in disaster situations. In Uganda, talking with refugees and volunteers gave us invaluable perspectives that will have a direct impact on our design decisions. It is vital for us to involve the people facing the brunt of the problem, the real experts, if we want to create effective solutions.”* For more information on these nine projects see our Community Engagement Annual Review 2017-18 in attachment 17.

Arup hosts Saturday Club Engineering Masterclass



Students designing and constructing tall towers from newspaper and sellotape

Arup has been working with the Sorrell Foundation since 2014 to deliver an annual Engineering Masterclass for students attending the National Art & Design Saturday Club. The club provides over 1,000 13-16 year olds across the UK the chance to study art and design at their local college for free.

The Arup Masterclass was held in our London office in April and welcomed 30 students from University of West London and Ravensbourne Art & Design Clubs. The workshop gives students an insight into working at Arup and paths into associated careers. The highlight of the day was the design and build of tall towers using newspaper and sellotape, then testing them under wind and gravity loads with a desk fan and Crème eggs. The surviving structures were displayed at an annual exhibition at Somerset House, which also featured exhibits from workshops with other designers including Jaguar and Rogers Stirk Harbour + Partners.

The Saturday Club Trust said *“We are very grateful to the fantastic team at Arup for being inspirational role models and providing truly eye-opening opportunities for the Club members”.*

Bridges to Prosperity



Members of the local community using the newly built 64m suspension bridge

Arup, in partnership with Bridges to Prosperity (B2P) and Bechtel, has designed and funded the construction of the Uwimpfizi footbridge in south Rwanda to benefit an isolated rural community.

In August 2017, a team of five Arup engineers from across the globe travelled to Rwanda to take part in the final stages of construction of the 64m span suspended footbridge over the river, the longest footbridge constructed by B2P in Rwanda. The newly constructed bridge will enable thousands of local residents to safely reach vital services such as schools, employment and healthcare. Maintenance training for members of the local community was undertaken to ensure the longevity of the footbridge.



### Expert healthcare team raise £25k for proton beam therapy



The Arup team celebrate at the summit of Mount Kilimanjaro

The Arup team designing the UK’s first proton beam therapy centre climbed Kilimanjaro to raise more than £25k for the project. The Proton Centre will be located in the largest single site cancer centre in Europe, the Christie in Manchester, which treats more than 44,000 patients a year.

This incredible achievement in aid of this worthwhile project further demonstrates Arup’s willingness and expertise in supporting developing areas of healthcare.



Manchester Proton Beam Therapy Centre, © HSK Architects Plc

### Mandela Day workshop aims to help poverty line workers



The Arup team celebrate at the summit of Mount Kilimanjaro

In South Africa ‘urban travellers’ (those with no fixed address), often lack safe places to stay, and typically work as unofficial recyclers due to South Africa’s lack of formal recycling processes. As a result, they tend to move from suburb-to-suburb collecting recyclable material on flatbed trolleys to sell at recycling depots.

On 18 July 2017, our Community Engagement network and staff from our Johannesburg office, brainstormed sustainable ideas for an urban campsite that could help this community. The resulting Urban Traveller Upliftment project aims to provide temporary shelter for 80 urban travellers at any given time in a safe, access controlled area. The temporary inhabitants will have access to ablution facilities, a mobile clinic, a community kitchen and secure docking stations for trolleys.

Although security and safety is provided for a brief period, ultimately our goal is to assist these travellers with reintegration into society. The project aims to register, up-skill and compile an employment history and placement to lift individuals from the poverty line.

### The Arup Education Trust



Students at the Award Day held in our Johannesburg office, February 2018

The South African office’s Arup Education Trust (AET) has an ongoing mission to support disadvantaged students in the built environment disciplines through financial assistance and support. The 2017 academic year was a great success and this was celebrated at the recent student induction and Award Day, held on 3 February 2018 in our Johannesburg office.

The programme has a holistic approach to student support which includes personal development and skills building in addition to academic funding. The personal development is supported by the AET’s partnership with NRRFS Projects and Distribution - an organisation which provides students with one-to-one interaction, progress monitoring, and assists pupils with goal setting and performance management - identifying any challenges together with the students early on, so they can be addressed before affecting academic performance. The Trust’s commitment to holistic development is recognised by their students, one of whom submitted the following feedback in last year’s student survey: “...the workshops and programmes (held by the AET) motivated me and helped me cope with academic pressures.”

### Success at Engineering Education Scheme Regional Finals



Pupils from Bablake School with their model for A120 Bypass and Flood Alleviation

Arup has supported the Engineering Education Scheme (EES) in the Midlands for 17 years, giving students first-hand experience of working alongside our engineers on a variety of projects to enhance their learning and gain valuable experience. EES aims to encourage uptake of Science, Technology, Engineering and Maths (STEM) subjects by teaching engineering principles in a project environment to teams of four students aged 17-18.

In 2017, we mentored pupils in Bablake School in Coventry, WMG Academy in Solihull and King Edward VI High School for Girls in Birmingham. We worked on three challenging schemes, all of which were a great success for both mentors and students. The scheme gave the students new opportunities, enabled them to learn new skills and encouraged two of the pupils to immediately join Arup for work experience during the summer holidays.

### Innovative, sustainable housing for refugees



AGRIshtelter computer generated design

Ongoing conflict in North Africa and the Middle East sees Europe facing its biggest refugee crisis since the World War II, bold and innovative ideas are needed for accommodating displaced people. Some of Europe’s 60 million refugees could benefit from AGRIshtelter.

The result of a global design challenge supported by Arup, AGRIshtelter addresses the chronic shortage of shelters to house the 60-million refugees forced to leave their home countries. It’s built using biodegradable, local materials - such as wood, canvas and straw - that are durable, provide good insulation and are readily available around any city.

Easy to assemble, the whole unit can be erected in one day without using any specialist skills or tools. It provides 35m<sup>2</sup> of accommodation that can easily be adapted for different needs, and can be built on vacant urban sites to prevent ghettos from forming on the outskirts of cities.

As one of five winners of the Refugee Challenge organised by Amsterdam-based organisation What Design Can Do, AGRIshtelter benefitted from Arup’s technical skills. Volunteers from our offices in Ireland, Italy, Germany and the Netherlands provided more than 200 hours of analysis, calculations, and sketches to ensure the shelter concept was technically feasible. Our specialists also researched how local, biodegradable materials such as straw could be used effectively.

In February 2017, a team of Arup volunteers, professors and students from the Politecnico di Milano, straw-bales experts and political refugees built a full-scale prototype of the AGRIshtelter in Milan. This enabled the architect, Narges Mofarahian, to refine the design based on lessons learned, and the aim is for the housing units to be used in Italy to help with the current refugee crisis.



Full-scale prototype of the AGRIshtelter in Milan





Pupils taking part in Engineering Engagement Day in Arup

Helping Hackney Winter Night Shelter rebuild lives



Hackney Winter Night Shelter (HWNS) provides more than 100 homeless people with emergency winter sleeping accommodation in venues across the London Borough, as well as supporting them to get their lives back on track. Six of our fire engineers assessed the 15 venues used this year, which included buildings such as church halls, to ensure they were safe.

The scheme provided safe sleeping accommodation to a total of 116 guests throughout the coldest months of the year. They get much more than just a hot meal and a warm bed, HWNS helps people rebuild their lives. Guests receive travelcards so they can attend important appointments. HWNS also works with local agencies to find them more stable accommodation and provides move-on packs to help them settle into new homes. This year, 73 guests were helped to move on, and the charity first asked us to do fire risk assessments in 2014, and turned to us again this year when fresh assessments were needed. Staff from our London, Leeds, Sheffield, Campus and Edinburgh offices contributed 326 hours of expertise, with 136 of those unpaid and the rest funded through our Community Engagement programme.

Bringing renewable energy to refugees in Ethiopia



We've partnered with Engineers Without Borders USA (EWB-USA) since 2010 on a variety of projects, and have been working at Dollo Ado since January 2018. Our team based in San Francisco, has helped with feasibility studies and design work, training refugees in electrical fundamentals, safety and installation methods, and overseeing the construction of micro-grids.

The refugees living in camps in the Dollo Ado region fled famine, drought, civil war and violence in Somalia. By installing 52 solar micro-grids, the project will bring clean, reliable and affordable electricity to the camps and create jobs for the refugees.

Stephanie Gulliver completed a 3-month volunteer assignment with UNHCR in Ethiopia, while other team members provided remote technical support. Already, 60 refugees have been trained in electrical safety and installation, providing them with a trade and giving the community expertise they can call on. Nine micro-grid systems have been installed at health centres in the refugee camps. And five energy cooperatives have been formed.

## United Nations Global Compact: Communication on Progress 2017

### Supporting Information

1. Global Human Rights Code of Practice
2. Global Harassment Code of Practice
3. UK Equality & Diversity Policy
4. Global Diversity & Inclusion Policy
5. Dignity at Work Policy
6. UKIMEA Diversity Strategy 2015-17
7. Global Diversity & Inclusion Code of Practice
8. UK Grievance Procedure
9. UKIMEA Environment & Sustainability Policy
10. UKIMEA Sustainability Report 2017-18
11. Ethics Code of Practice
12. Guidance on Making Ethical Decisions
13. UK Disciplinary Procedure
14. Global Privacy Policy
15. Global Community Engagement 3-Year Plan 2018-21
16. Community Engagement Annual Review 2017-18







# Human Rights : code of practice

## CODE OF PRACTICE

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Arup is founded on the principles of ensuring that our people's work is interesting, rewarding and stimulated by a drive for excellence in an environment where people's lives are inextricably linked with those of other human beings.

A guiding principle of the firm is that everyone accords to others the rights that individuals claim for themselves and accept the moral and humanitarian values that this embraces. A person cannot be treated just as a link in a chain of command but as someone whose happiness and prosperity is a concern of all.

## PURPOSE

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Our approach on human rights reflects this by:

**Value Diversity.** Ensuring that Arup people work in an environment that is free from all forms of discrimination and that they are valued as individuals and treated with dignity and respect. Discrimination on the grounds of age, disability, gender reassignment, marriage/civil partnership, pregnancy/maternity race, religion or belief, sex, sexual orientation, part time working, flexible or fixed term working is in conflict with our guiding principles.

**Self Esteem.** Providing an environment that is free from any form of harassment or intimidation by eliminating any form of behaviour or abuse that could affect an individual's self-esteem, including bullying and victimisation.

**Life Balance.** Helping people to more easily balance their work, domestic and personal lives

**Fair Reward.** Fairly compensating staff through pay and benefits for their labours. Providing for rewards and other means for staff to share in the firm's success.

**Effective Workplace.** Giving people a safe, clean, comfortable and healthy working environment that provides for the needs of all staff.

**Integrity.** Operating in an environment where we demonstrate consideration for people and respect for the job they do when they are striving to achieve the best that they can.

**Personal Development.** Treating people fairly, respecting the sanctity of human life and allowing gifted people to unfold.



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**Acting Honourably.** Acting honourably in our dealings with our own and other people

**Social Responsibility.** Being aware of our social responsibility, striving to do socially useful work and joining hands with others who are working to achieve these values

**Respect.** Ensuring that no-one is subjected to arbitrary interference in their privacy, home or family or attacks on their honour or reputation.

## EFFECTIVE DATE

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October 2015

## APPLICABILITY

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All staff working for Arup worldwide, and others engaged by the Firm in any capacity, including clients, candidates and other third parties.



# Harassment : code of practice

## PURPOSE

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The code of practice on harassment sets out Arup's commitment to the creation of a fair, humane, welcoming and inclusive environment where harassment is unacceptable and where members of its community treat each other with dignity and respect. The following code of practice informs staff of the type of behaviour that is not acceptable and provides employees who are subjected to harassment with a means of redress without fear of reprisal.

## CODE OF PRACTICE

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Harassment is harmful, unlawful and can reduce the effectiveness of the firm by undermining the confidence of staff. Harassment is defined as any form of unwanted conduct and behaviour which has the purpose or effect of violating a person's dignity and creating an intimidating, hostile, degrading, humiliating or offensive environment for the person.

Employees have a right to work in an environment:

- In which they are protected and which is free from harassment and / or bullying and aggression
- To be treated with dignity and respect
- To be treated in a fair and equitable manner
- To be protected from victimization or retaliation if they, in good faith, brought a complaint of harassment

The firm will take positive action to prevent its occurrence. Any complaint will be taken seriously and the necessary resources deployed to investigate and resolve the matter.

## EFFECTIVE DATE

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October 2015

## APPLICABILITY

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All staff working for Arup worldwide.



# **Equality and Diversity UK Policy**

## **Introduction**

Arup is committed to creating a work environment where everyone is treated equally, fairly, with dignity and respect. This is irrespective of age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race (which includes colour, nationality, and ethnic or national origins), religion and belief, sex, sexual orientation (the protected characteristics under the Equality Act 2010) and employment status as permanent, specific term, full-time or part-time status.

Arup is committed to providing equal opportunities in employment and to eliminating all forms of discrimination in employment and in our dealings with our clients and others we come into contact with in the course of doing business. We value the differences that a diverse workforce brings to Arup. We recognise and respect each other's differences and strive to build a working environment where our different values and perspectives are actively harnessed to create best solutions for our equally diverse client base. This is not only central to Arup's Diversity and Inclusion strategy but is also central to Arup's values.

Adherence to this policy is everyone's responsibility to enable us to meet our ambition of developing a truly inclusive environment where all employees feel able to fulfil their role effectively and progress their careers.

## **Dignity at work**

We will treat complaints of bullying and harassment sensitively and maintain confidentiality to the maximum extent possible. Please refer to the Dignity at Work UK policy for more information.

## **Equal opportunities and diversity in employment Recruitment**

Our Equality and Diversity UK policy applies equally to all recruitment activities, both internally and externally.

Those involved in the recruitment process have the responsibility of ensuring they comply with this policy and its proper implementation. Information and training in support of this policy are available; each Arup employee is responsible for obtaining these as necessary.

The selection process shall be based on a job description and person specification which relates to the particular experience, knowledge and skills that are needed for the safe and effective performance of the job.

Applicants should not be asked about health or disability before a job offer is made (there are limited exceptions to this rule – please refer to the HR Team for further advice). Nor should applicants be asked about matters concerning protected characteristics.



Any complaints will be investigated and referred to the Grievance or Disciplinary procedure if appropriate. In the event of any complaint or criticism being made by a job applicant in relation to the application of this policy, the firm's Grievance UK procedure should be followed.

Arup is required by law to ensure that all employees are entitled to work in the UK. Assumption about immigration status should not be made. All prospective employees, regardless of nationality, must be able to produce original documents before employment starts to satisfy current immigration legislation.

### **Training and development**

All Arup employees will have equal access to training or learning and development opportunities relevant to their role. Any selection criteria applied to training opportunities will take full account of this policy.

### **Career development and promotion**

The selection criteria for promotion and other career development opportunities within Arup will consider the relevant qualifications, experience and requirements that are needed for the safe and effective performance of the job and shall take full account of this Equality and Diversity UK policy.

### **Reward**

Arup's approach to reward fully embraces the principles of equal opportunities and diversity.

### **Selection for redundancy and termination**

If job functions become redundant, the selection process shall take full account of this Equality and Diversity UK policy.

The firm will ensure that any criteria applicable in the selection for redundancy are fair and objective and do not directly or indirectly conflict with this policy.

Those responsible for selecting and informing employees of redundancy and/or terminating an employee's employment are responsible for ensuring they are familiar with this policy and for ensuring its proper implementation. Information and training in support of this policy are available.

### **Grievance**

If you believe you have not been treated equitably in accordance with this Equality and Diversity UK policy, you should refer to the firm's Grievance UK procedure for details of action that may be taken. Allegations regarding the potential breach of this policy will be treated as far as possible in confidence. If you believe that you may have been subject to harassment, you are encouraged to raise this matter through the Dignity at Work UK policy.



If the grievance issue relates to the behaviour or actions of your manager or if you are not comfortable talking to your manager because of the nature of the grievance e.g. sex discrimination, the matter may be raised with either a member of the HR Team or another member of Arup who is at least as senior as your manager. In this event, the manager approached should notify the HR Team immediately.

## **Monitoring**

Arup employees and job applicants are expected to provide reasonable personal data in order to ensure that our policies and employment practices are applied equitably throughout the firm. Such information will be requested upon application, when becoming a member of the firm, and as requested from time to time.

Any such information collected will be treated confidentially and will only be used for the purpose of monitoring whether our practices meet the aims stated in this policy. The Arup Staff Privacy Notice (available on Essentials) explains what personal data we collect and for what purpose and your rights in respect of our use of your personal data.

## **Disability**

If you are disabled or become disabled, we encourage you to inform the HR Team about your condition so that we can support you as much as possible. If appropriate, the HR Team may wish to consult with you and/or medical advisors about possible reasonable adjustments to support you. We will consider the matter carefully and try to accommodate individual needs. However, if we consider that a particular adjustment would not be reasonable, we will explain our reasons and try to find an alternative solution where possible.

## **Roles and responsibilities**

**Every Arup employee** has a responsibility to ensure they familiarise themselves with and uphold our Equality and Diversity UK policy. They will assist the firm to meet its commitment to provide equal opportunities in employment, avoid unlawful discrimination, and to ensure that everyone with whom we work is treated equally and honourably. Acts of discrimination, harassment, bullying or victimisation (see definitions below) are disciplinary offences and will be dealt with under Arup's Disciplinary UK procedure. Your attention is also drawn to Arup's separate Dignity at Work UK policy.

**Managers** have a particular responsibility to ensure that grievances are investigated, that confidentiality is maintained and that appropriate action is taken.

**The HR Team** has a particular responsibility to ensure that the firm's employment practices do not discriminate, directly or indirectly, against its members and job applicants. It will do this by monitoring procedures and providing a framework, which facilitates access to opportunities. The HR Team will also support the Grievance procedure. The HR Team will assist leaders and employees with advice and guidance involved in the use of this policy and will keep it under review. The HR Team will monitor our employment policies and practices to ensure that they conform to relevant legislation, remain free from bias, that decisions are made on the basis of merit and enable us all to take advantage fully of available opportunities. The HR Team will



take action to redress any examples of discriminatory employment practices including direct or indirect discrimination, harassment and/or victimisation (see definitions below). Any such examples within Arup should be brought to the attention of the HR Team.

**The firm** takes this commitment very seriously. Any acts of discrimination by its members will be investigated in accordance with the firm's Disciplinary UK procedure and could result in disciplinary action, including termination of employment if appropriate. Arup strives to ensure that our service delivery contracts and agreement give due regard to equality and operate an equal opportunity policy in accordance with our policy.

## **Types of Unlawful Discrimination**

**Direct Discrimination** – treating individuals less favourably because of a protected characteristic, e.g. race, age etc., or their employment status e.g. permanent, specific term or full or part time workers.

**Indirect Discrimination** – where a provision, criterion or practice is applied to everyone but has a disproportionate adverse impact on a group with a protected characteristic and on the person within that group who is making the complaint.

**Harassment** – where there is unwanted conduct related to a protected characteristic that has the purpose or effect of violating an individual's dignity or creating an intimidating, hostile, degrading, humiliating or offensive environment for that individual. Harassment is dealt with further in our Dignity at Work UK policy.

**Discrimination based on perception or association** – where an individual is directly discriminated against or harassed based on perception that he/she has a protected characteristic when he/she does not; where an individual is discriminated against or harassed because of their association with a person who has a protected characteristic.

**Victimisation** – where an individual is subjected to detriment because they made or supported a complaint or initiated proceedings connected with a complaint of discrimination or harassment on the grounds of a protected characteristic.

**Disability** – Disability is a protected characteristic under the Equality Act 2010. A person has a disability if they have a physical or mental impairment, and the impairment has a substantial and long term adverse effect on their ability to carry out normal day to day activities.

**Failure to make reasonable adjustments** – is where a physical feature or a provision, criterion or practice puts a disabled person at a substantial disadvantage compared with someone who does not have that protected characteristic and the employer has failed to make reasonable adjustments to enable the disabled person to overcome the disadvantage.

## **Review of this policy**

This policy will be monitored periodically by Arup and will be updated in accordance with changes in law. This policy is not contractual and can be amended by the firm at any time.

## **Legislation relating to this policy**



The following is only a guide to the legislation that impacts on this policy and is not a comprehensive list:

Equality Act 2010

Special Educational Needs and Disability Act 2001

Protection from Harassment Act 1997

Employment Rights Act 1996

Employment Relations Act 1999

Part-time Workers (Prevention of Less Favourable Treatment) Regulations 2000 (SI 2000/1551)

### **Policy owner**

Diane Thornhill, HR Director for UKMEA



## Equality, Diversity and Inclusion Policy

Arup is committed to creating an inclusive working environment based on merit, fairness and respect. One that encourages talented people of any background to produce their best work of the highest quality. As a humane organisation, we embrace the skills, abilities and knowledge, that only a diverse and inclusive workforce can provide, to create solutions, and give advice, that improves society as a whole.

### Aims

Treat everyone fairly, with dignity and respect; as we would wish to be treated.

Maintain fair and honourable dealings with our people, where recognition, reward and opportunity reflect the ability, experience and aspiration of the individual.

Create an environment that brings the best skills to our work, in which we value individual differences and recognise the contributions of all our people.

### We will

Recruit talented people from a wide range of backgrounds with differing beliefs and personal characteristics.

Ensure full and effective participation and equal opportunities for everyone.

Invest in the education and development of our people and provide them with opportunities to reach their full potential.

Increase our people's awareness and understanding of equality, diversity and inclusion, including its importance.

Provide equitable pay based on roles, responsibilities and performance.

Identify and address inappropriate behaviour or discrimination.

Seek to work with clients and collaborators with due consideration that their EDI commitments are consistent with our own.

Measure how we are performing; report regularly and act to address any barriers.

### Governance

This policy is set by the Group Board and implemented across all Arup operations through rules, procedures and guidance.

It is reviewed and approved annually, or more frequently if appropriate.

The Equality, Diversity and Inclusion (EDI) Director acts for Arup in developing a plan to enable us to reach the aims set out in this policy while fulfilling applicable legal, regulatory and other requirements.

**“It is up to us... to create an organisation which will allow gifted individuals to unfold... where every member is treated... as a human being whose happiness is the concern of all.”**

Ove Arup, 1970



Tristram Carfrae  
EDI Director  
April 2018



# **Dignity at Work UK Policy**

## **Introduction**

Arup aims to ensure that all individuals are treated with dignity and respect at work or at work/client related functions, free from harassment or bullying. The firm expects individuals to behave in a professional and appropriate way towards others, both inside and outside work.

Any complaint will be taken seriously and will be investigated. Once the investigation is completed, the manager or leader who initiated the investigation will decide, based on the findings, the appropriate action to be taken. Bullying and harassment will be treated as misconduct.

Conversely, any malicious complaint which, on investigation, is shown to be without foundation, will also be treated as misconduct.

Individual members of staff may in some cases be legally liable for bullying or harassment of colleagues or third parties and may be ordered to pay compensation by a court or an Employment Tribunal.

## **Bullying**

Bullying may be characterised as offensive, intimidating, malicious, or insulting behaviour; an abuse or misuse of power through means which undermine, humiliate, denigrate, or injure the recipient.

## **Harassment**

Harassment may be characterised as unwanted conduct affecting the dignity of people in the workplace. It may be related to age, disability, gender reassignment, race (which includes colour, nationality, and ethnic or national origin), religion or belief, sex, sexual orientation, or any other personal characteristic of the individual. It may be persistent or an isolated incident. The key is that the actions or comments are viewed as demeaning and unacceptable to the recipient, whether or not this is intentional. It can occur in or out of the work place, such as on business trips or at events or work related social functions.

Harassment is any physical, verbal or non-verbal contact which has the purpose or effect of violating a person's dignity or creating an intimidating, hostile, degrading, humiliating or offensive environment for them. It also includes treating someone less favourably because they have submitted or refused to submit to such behaviour in the past.

## **Examples of bullying or harassment**

Bullying and harassment may be misconduct that is physical, verbal or non-verbal, e.g. by letter or email (so-called "flame-mail").

Examples of unacceptable behaviour that are covered by this policy include (but are not limited to):

- physical conduct ranging from unwelcome touching to serious assault;
- unwelcome sexual advances;
- the offer of rewards for going along with sexual advances, e.g. promotion, access to training;
- threats for rejecting sexual advances, e.g. suggestions that refusing advances will adversely affect the employee's employment, evaluation, pay, advancement, assigned work, or any other condition of employment or career development;
- demeaning comments about a person's appearance;
- unwelcome jokes or comments of a sexual or racial nature or about an individual's age, disability, sexual orientation or religion;
- questions about a person's sex life;
- unwanted nicknames related to a person's age, race or disability;
- the use of obscene gestures;
- excluding an individual because they are associated or connected with someone with a protected characteristic, e.g. their child is gay, spouse is black or parent is disabled;
- ignoring an individual because they are perceived to have a protected characteristic when they do not, in fact, have the protected characteristic), e.g. an employee is thought to be Jewish, or is perceived to be a transsexual;
- the open display of pictures or objects with sexual or racial overtones, even if not directed at any particular person, e.g. magazines, calendars or pin-ups;
- spreading malicious rumours or insulting someone;
- picking on someone or setting them up to fail;
- making threats or comments about someone's job security without good reason;
- ridiculing someone;
- isolation or non-cooperation at work; and
- excluding someone from social activities.

## **Victimisation**

Victimisation is subjecting a person to a detriment because they have, in good faith, complained (whether formally or otherwise) that someone has been bullying or harassing them or someone else, or supported someone to make a complaint or given evidence in relation to a complaint. This would include isolating someone because they have made a complaint or giving them a heavier or more difficult workload.

Provided that you act in good faith, i.e. you genuinely believe that what you are saying is true, you have a right not to be victimised for making a complaint or doing anything in relation to a complaint of bullying or harassment and the organisation will take appropriate action to deal with any alleged victimisation, which may include disciplinary action against anyone found to have victimised you.



Making a complaint that you know to be untrue, or giving evidence that you know to be untrue, may lead to disciplinary action being taken against you.

Bullying, Harrassment and Victimisation does not include the legitimate, reasonable and constructive criticism of a member of staff's performance or behaviour, or reasonable instruction given to a member of staff in the course of their employment.

### **First step to raising a concern - informal procedure**

If an individual considers that they are or have been subjected to inappropriate behaviour such as bullying or harassment, they should initially attempt to resolve the problem informally, explaining clearly to the person responsible that their behaviour is not acceptable and that it is offensive or makes them feel uncomfortable.

If this is too difficult to do, or the individual is in any doubt as to whether an incident or series of incidents which have occurred constitute a breach of their dignity at work, they should seek support from their manager. If the complaint concerns the manager, or the individual feels more comfortable discussing the issue with a different colleague then the individual should speak informally to a member of the HR Team. They will provide the individual with confidential advice and support in order to assist in the resolution of any problems, whether through informal or formal means.

Where possible, an informal approach to resolving the problem should be attempted in the first instance.

### **Next step - Formal procedure**

Where informal methods are not appropriate to resolve matters or if after informal steps have taken place and the conduct continues, or where a more serious incident of bullying or harassment occurs, individuals have the right to bring a formal complaint using the firm's Grievance UK policy and procedure. The complaint should be made in writing, and where possible state:

- the identity of the person who is the subject of the complaint;
- the nature of the conduct in question;
- date(s) and time(s) when the conduct has occurred;
- names and witnesses to any incidents of the conduct;
- any action taken by the individual to stop the conduct.

Individuals may raise a complaint of bullying or harassment either with their manager, a more senior member of the firm or directly to their local HR Business Partner. Where the complaint is raised initially with a manager, the manager should immediately involve the HR Business Partner.

The manager will arrange for a thorough investigation of the complaint. The purpose of the investigation is for Arup to establish a fair and balanced view of the facts relating to the complaint/grievance. It will be conducted by someone with no prior involvement in the complaint. The steps taken will be those set out in the Grievance UK procedure. As far as possible, confidentiality will be maintained throughout the investigation. Individuals not involved in the complaint or the investigation are not to be told about it. It may be necessary

to interview witnesses to the incidents complained of, and if so the importance of confidentiality will be emphasised to them.

The investigator will also meet with the alleged harasser or bully to hear their account of events. They have the right to be told the details of the allegations against them so they can respond.

Where the complaint is about someone other than an employee, such as a contractor, customer, supplier or visitor, we will consider what action may be appropriate to protect the complainant and anyone else involved, pending the outcome of the investigation, bearing in mind the rights of that person and the reasonable needs of the firm.

Once the investigation is completed, the manager who initiated the investigation will decide, based on the findings, the appropriate action to be taken. This may include disciplinary action, in which case the Disciplinary UK procedure will apply. A meeting will be arranged with the complainant to discuss the outcome and what action, if any, should be taken. This may include dismissal without notice for serious incidents.

The right to bring a colleague to the meeting applies, whether or not the complaint is upheld. We will consider how best to manage the ongoing working relationship between the complainant and the alleged harasser or bully. This may include some form of mediation or counselling, or change to the duties, working location or reporting lines of both parties.

As a general principle, the decision whether to progress a complaint is up to the person who raises it. However, Arup has a duty to protect all staff and may pursue the matter independently if we consider it appropriate to do so. Any false or malicious complaint which, on investigation, is shown to be without foundation, will also be treated as a disciplinary matter.

If the complainant or the person who is the subject of the complaint is dissatisfied with the outcome of the procedure then they may appeal, (see appeals procedure in the Grievance UK procedure and/or Disciplinary UK procedure).

## **Roles and responsibilities**

- Managers have a particular responsibility to set a good example by their own behaviour
- Any manager who receives a complaint of bullying or harassment must arrange for an investigation of the complaint or incident and ensure that the problem is resolved as quickly as possible, making sure that appropriate action is taken to ensure compliance with this policy and procedure. Failure to take corrective action may in itself be treated as a disciplinary offence.
- All managers have a duty to establish and maintain a working environment free from bullying or harassment and should be observant and alert to the kind of behaviour which might indicate that a problem exists. Managers should also be prepared to deal with any inappropriate behaviour even if it has not been complained about.
- Managers are responsible for notifying the HR Business Partner when a formal case is raised, and must keep the HR Team informed and involved as necessary, throughout the procedure.
- Managers are responsible for ensuring that employees for whom they are responsible have knowledge of and understanding of the firm's code of practice.



## **HR Team**

- The HR Team will assist managers and employees with advice and guidance involved in the use of this code of practice and will keep it under review.
- The HR Team will also arrange for employees who request it to have access to advice from trained counsellors, e.g. from the firm's Employee Assistance Programme.

## **Employees**

- All employees must comply with this policy and take steps to ensure that bullying and harassment does not occur
- Any employee who feels bullied or harassed should feel confident that complaints will be taken seriously and dealt with in confidence
- Any employee who is made aware of bullying and harassment by a colleague must respect the dignity of the parties involved and should encourage the person being bullied or harassed to consider using the correct procedure.
- If an employee believes that a colleague is being bullied or harassed and that they have not complained about it, then it is the employee's duty to report the incident to their manager or to the HR Business Partner.
- Employees who make complaints or who participate in good faith in any investigation conducted under this policy must not suffer any form of retaliation or victimisation as a result. If you believe you have suffered any such treatment you should inform your HR Business Partner. If the matter is not remedied, you should raise it formally using the firm's Grievance UK procedure. Anyone found to have retaliated against or victimised someone for making a complaint or assisting in good faith with an investigation under this procedure will be subject to disciplinary action under the firm's Disciplinary UK procedure.

## **Review of this policy**

This policy will be monitored periodically by Arup and will be updated in accordance with changes in law. This policy is not contractual and can be amended by the firm at any time.

## **Legislation relating to this policy**

The following is only a guide to the legislation that impacts on this policy and is not a comprehensive list:

Equality Act 2010

Equality Act 2010 (Statutory Duties) (Wales) Regulations 2011 (SI 2011/1064)

Equality Act 2010 (Specific Duties) Regulations 2011 (SI 2011/2260)

Health and Safety at Work etc Act 1974

Protection from Harassment Act 1997

Management of Health and Safety at Work Regulations 1999 (SI 1999/3242)

## **Policy owner**

Diane Thornhill, HR Director for UKMEA

# UKMEA diversity and inclusion strategy 2015-2017



# UKMEA diversity and inclusion strategy 2015-2017

## Vision

*We want to be able to tell a story.*

*A story of an organisation that recruits, retains and develops a truly diverse workforce that reflects the communities it serves, no matter the grade or discipline.*

*The kind of place where people are proud to work, and feel comfortable in their own skin.*

## Why diversity and inclusion is important

Everyone is different and everyone's perspective matters.

At Arup we recognise that diverse teams stimulate innovation and respond better to society's needs. Diversity is about acknowledging and celebrating these differences and ensuring that everyone is treated fairly.

By embracing an inclusive culture that supports diverse talent, our people collaborate successfully and enable Arup to compete effectively. At Arup, we will provide an inclusive culture to enable everyone to feel they have a voice, and to be themselves.

Read on to see how our strategy will deliver this vision.

## This Report

## Introduction

Fostering a culture of inclusion is not a new idea, indeed, it is part of the very foundation on which Arup was built. To quote Ove Arup:

*“If we can reach a stage where each man or woman is respected for the job they do, and is doing his or her best because the atmosphere is right, because they are proud of what we are and do and share in the general enthusiasm, then we are home.”*



We want our people to feel valued and for this they need to be treated with dignity and respect. And yet we know this doesn't always happen and sometimes barriers exist which prevent everyone from being treated equally.

To make sure this happens, we have created this diversity and inclusion strategy; a plan of action with key deliverables to keep us on track. Its overriding principle is a simple one: people should be appreciated as

individuals for reasons related to business interests, as well as for moral and social reasons. **It's the right thing to do.**

In taking the widest possible view of inclusion and diversity, going beyond abilities, age, ethnicity, religion, sexual orientation, gender identity and expression, we will create an environment that welcomes and delights in the richness of our differences and in which all can thrive.

### Diversity and inclusion: The business case

The benefits that a diverse and inclusive organisation can bring include:

- The ability to recruit, retain and progress the best talent. Research shows that employees are 20% more likely to stay at a company where difference and inclusion co-exist <sup>1</sup>
- An impact on our bottom line. Companies with inclusive cultures are 45% more likely to have improved market share, and 70% more likely to have captured a new market <sup>2</sup>
- Improvement in our leadership and decision making capability
- More opportunities for innovation; diversity and inclusion embedded within teams discourages 'group think'
- Reputation; meeting client and wider stakeholder expectations; demonstrating we know diversity & inclusion is not just a 'nice to have'
- Alignment with our values; increasing staff satisfaction.

<sup>1</sup> The Corporate Executive board Global Labour Market survey of 18,500 employees

<sup>2</sup> The Centre of Talent Innovation (2013) Study looks at 75 corporations, across 192 countries covering 6 million employees



## Where are we now?

### Diversity and inclusion at Arup

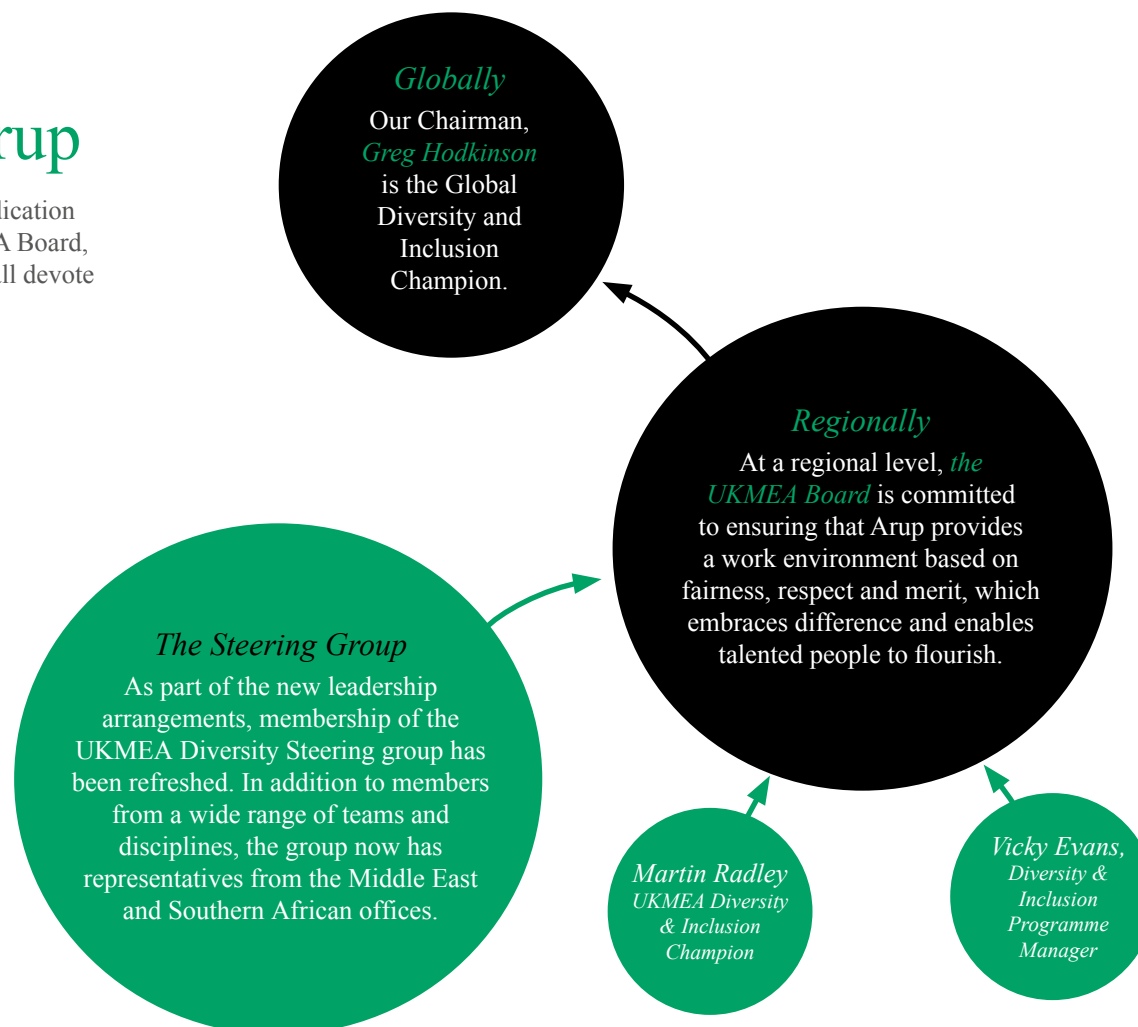
A diverse and inclusive environment is only possible with the support, dedication and input of our people. Every single one of us. That includes our UKMEA Board, committed champions, steering group and Connect group members, who all devote time and energy to help make Arup a better place.

#### Championing D&I at Arup

Diversity and inclusion go hand in hand. Diversity is essential to the future of Arup, and we have been working hard for a number of years to cultivate a more inclusive working environment. We are approaching the challenge in a co-ordinated and global manner and the agenda is championed from the very top.

Whilst good progress has been made, we still have a long way to go before we can say we truly reflect the world we shape.

*You* have a voice in this strategy. We welcome your comments as we move into the implementation phase. You can either email the team at [diversity@arup.com](mailto:diversity@arup.com) or feed your ideas back via your group and office leaders.



## Going forward Our strategy 2015-2017

This strategy sets out our vision for the next two years and outlines how we hope to achieve even greater progress. We know that when we can play to our strengths and sense of identity, we get a direct uplift in performance.

### Employee Owned

This strategy is based on the voices of our people. In August 2014, we appealed on Opal Brainstorms for your ideas and feedback on what the new strategy should include and focus on. We had numerous responses, some of which are shown here.

The strategy has integrated as many ideas from the Opal Brainstorms as possible.

"We need more transparency - why was someone recruited or promoted? This lets other people see what skills are required to 'make it' whilst also celebrating the individual concerned"

"Recruitment outreach and engagement with schools is important. If we're (rightly) hiring on merit we can only make a difference by improving diversity in our pool of applicants"

"Awareness of one's unconscious bias for all colleagues (not just grades 7+)"

"Focus on all aspects of inclusion: different backgrounds, sex, sexuality, nationality, religion etc"

"We should definitely communicate the numbers better. For example, would people be surprised to find that the region with the lowest percentage of Grade 9 women is UKMEA?"

"We are generally good, but the spread is sporadic and there are some teams & team leaders that are far behind the progress of others"

"Inclusion (or exclusion) can be subtle. Meeting rooms are named after great Arupians but there are no women or people of different ethnicity. We should have a greater variety of faces!"

"We need to improve the industry stereotype"



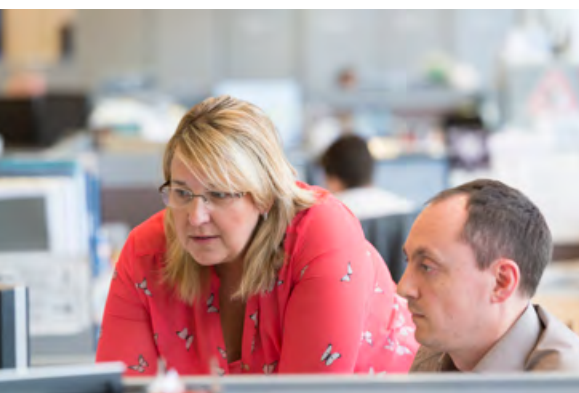
## Structure of the strategy

The strategy is based on seven principles which will shape our activities going forwards and is structured as follows:

- *Key principle* e.g. informed and measured
- *What does this mean?* provides an understanding of what the key principle means in practice
- *Details of previous and on-going activities* to achieve the key principle. This helps us celebrate our successes so far
- *New activities* to support the key principles
- *Measurement* of our progress

Progress will be reported quarterly to the UKMEA Region Board by the Steering Group. The strategy and the progress made will be communicated both internally and externally.

## The strategy: Informed & measured



### What does this mean?

- We will ensure our people are informed about the importance of diversity and inclusion at Arup, empowering people to lead in an inclusive way
- Ensure all of our people are informed about their own unconscious biases
- Collect and measure baseline diversity data to understand the characteristics of our workforce. This will allow us to measure improvement and showcase our successes
- Undertake a benchmarking exercise and adapt an appropriate quality standard to measure our performance and provide an objective view of our progress

### Previous and on-going activities

- In May 2009 we created our Inclusive Leadership Programme. The aim was to give leaders the skills and knowledge to recognise that everyone has unconscious bias, and to understand how to manage that bias. Since its inception 450 of our grades 7-9 have attended this training, although attendance is voluntary
- In October 2012 an external consultant, Dr Helen Zarod, reviewed gender diversity and recommended areas for improvement which have since been implemented
- Arup was the first engineering firm to sign up to the Stonewall programme. We have been working closely with Stonewall to improve our Workplace Equality Index results since joining in 2012, and our current rating places us in the top 200 firms

### New activities

- Revise the current Inclusive Leadership Programme to ensure it applies current research around unconscious bias and inclusion. It should also make attendance mandatory for all Grades 7-9
- Develop and deliver an unconscious bias awareness e-module, to be available for all staff.
- Undertake voluntary annual 'Who Works at Arup?' survey. Collate data on gender, age, ethnicity, sexual orientation, disability, caring responsibilities and flexible working arrangements, in line with the Equality Act 2010
- Meaningfully disclose the data, initially via the group leaders to communicate to their groups, and then publish the data, as appropriate, internally and externally
- Develop a process to track progress and encourage gradual improvement
- Seek out and implement a suitable benchmarking process / external audit. Undertake benchmarking exercise to reflect all 'equality strands' rather than just gender, or sexuality e.g. National Equality Standard (or other appropriate quality standard)

### Measurement

- New Inclusive Leadership Programme launched
- % of leadership staff who have taken part in Inclusive Leadership learning events
- % of staff who have accessed unconscious bias training
- Report results from the Who works at Arup survey
- Publish data
- Report survey response rate
- Report whether benchmarking has occurred and the results
- Achievement of a level which accurately recognises the progress we are making and where we need to go next



## The strategy: Flexible



### What does this mean?

- We will showcase and celebrate Arup's **flexible working policies** which enable our people to seek different working arrangements during their careers

### Previous and on-going activities

- Successful flexible working stories are showcased on the intranet. These will continue with a spread of grades, cultures and genders represented

### New activities

- Include flexible working as part of appraisal discussions
- Monitor uptake of flexible working arrangements

### Measurement

- Requirement introduced successfully into the appraisal system
- Publish data

## The strategy: Connected & engaged



### What does this mean?

- We will promote an inclusive and fair culture where people feel respected, **engaged**, can be themselves and can speak out. This way, we will retain talent
- Provide staff with the opportunity to be **connected and engaged** with networks and form relationships that support them as individuals in contributing to Arup's success

### Previous and on-going activities

- Our three Connect networks (Connect Cultures, Out and Women) celebrate our diversity and promote inclusion through regular events, workshops and speakers

### New activities

- We will continue to support all Connect networks to host regular client and internal events focused on relevant and stimulating topics and will encourage more cross-working between 'Connect' Groups. We will boost internal engagement and involvement with 'Connect' Groups and their events through more targeted communication
- Support the launch and operation of Connect Cultures in Southern Africa and Middle East
- Launch a disability group / network (including a focus on Mental Health) (subject to demand)
- Launch a family network

- Review reasons for staff leaving after two years at Arup (data recorded by HR), and publish results on the intranet. Dependent on results, commission specific separate research
- Undertake progress interviews for new staff recruited at Grade 7-9 to ensure they are aware of Arup's inclusion policies
- Investigate the possibility of undertaking exit interviews, six months after exit and feedback to business leaders.

### Measurement

- Hold three 'external' events per year per Connect Group and one combined external Connect event
- Report whether Connect Cultures has been established in Southern Africa and the Middle East
- Report whether additional disability group / network and family network has been established and scope required support, awareness raising and training
- Report whether a review of staff leaving has taken place and if data has been made available
- Report whether progress interviews are undertaken



## The strategy: Balanced



### What does this mean?

- We will work toward a **balanced** allocation of opportunities for all staff. We must ‘level the playing field’ and target support towards those groups who are currently underrepresented in leadership

### Previous and on-going activities

- Connect Out has developed a mentoring scheme which launched in August 2013. This scheme is on-going. A mentoring scheme specifically for women, to provide women at Arup with female mentors was successfully piloted in the Campus office and is about to launch in Scotland and the North East
- Diversity and inclusion is a standing agenda item on UKMEA board meetings
- Diversity and inclusion is a standing agenda item at group reviews
- Policies and guidance relating to the promotion process have been communicated and published on the HR intranet homepage

### New activities

- Continue to address barriers which we believe are inhibiting entry and progression in the firm. Review and bolster mentoring programme for all staff, initially targeting those from minority backgrounds
- Continue to challenge promotions on basis of diversity and inclusion
- Increase Board membership to include person(s) from wider inclusive pool
- Provide access to bespoke training materials that support career development at Arup. Work with providers to ensure materials are available and suitable for all staff

### Measurement

- Mentoring taking place throughout the firm
- % of female and other minority leaders in a mentoring relationship
- % of female and minority Board members
- % of female and minority staff
- % of female and minority staff in leadership roles (Grades 7-9)
- Corporate membership of three organisations which provide access to bespoke career development training

## The strategy: Transparent & accountable



### What does this mean?

- We will apply **transparent** and merit-based processes to advertise, appoint and promote the best people to new roles
- Leaders will be **accountable** for implementing positive action and involving their teams to ensure a culture that celebrates diversity

### Previous and ongoing activities

- All role descriptions are posted on Arup News for internal and external recruitments
- Where certain roles/vacancies are not appropriate for open posting and enrolment, the UKMEA Region Board takes on responsibilities for reviewing diversity issues

### New activities

- Sign up to and champion the principles in Think, Act, Report to drive greater transparency on gender and wider diversity employment issues
- Formalise and publish role descriptions and terms of reference for leadership roles at office, region and for practice leadership
- Advertise portfolio role vacancies and accompanying role descriptions on the intranet
- Nomination for UKMEA Board membership to be more transparent

- In line with the UK Corporate Governance Code provisions, disclose meaningful information about the Board appointment process and how we address diversity in the company's Annual Corporate Report, including a description of the search and nominations process<sup>5</sup>
- Each group and business to have an inclusion plan and leaders' performance to be measured against delivery of the plan as part of appraisal

### Measurement

- Whether Arup is signed up to Think, Act, Report
- If formalised role descriptions and terms of reference are published on the intranet
- Whether portfolio role vacancies and role descriptions are available on the intranet
- Nomination process for UKMEA Board membership to be reviewed for transparency
- Disclosure of Board appointment process in annual corporate report
- Requirement introduced successfully into the appraisal system
- % of leadership staff with positive diversity and inclusion feedback in their appraisal



## The strategy: Industry leading recruiter & employer



### What does this mean?

- We want to attract and **recruit** the widest range of talent available and positively influence the career choices of the next generation – particularly those who may not traditionally apply to work at Arup
- We want to lead by example by promoting an increased focus and adoption of diversity and inclusion to the wider industry

### Previous and ongoing activity

- We have relationships with a number of schools and universities which traditionally feed into our graduate streams. However, to ensure we are fully fishing from the widest pool of talent, a refresh of these schools and universities is required
- Continue engagement with current industry partners such as WISE, Stonewall, Association of Black Engineers, WES, Royal Academy of Engineering, RICS etc to ensure that collaborations continue to advance the diversity and inclusion agenda

### New activities

- Promote Arup staff involvement with agencies such as Education and Employers to raise awareness of Arup as a diverse employer and stimulate pipeline. This includes holding lunchtime sessions, signposting to the website and celebration of Arup staff attendance at schools

- As part of graduate recruitment selection, review removing the following information as part of application review:

- Gender
- Address
- Name
- School

This will remove any biases which may influence selection process.

- Up-skill HR and interviewers to understand specific needs for recruitment of different equality strands e.g. gender, ethnicity etc

### Measurement

- Number of Arup staff attending education and awareness raising at schools
- Whether removing information from CVs prior to selection review has any positive effect
- Tailored diversity awareness training provided to HR to ensure specific recruitment needs understood

## The strategy: No nonsense communication



### What does this mean?

- We want to use effective **communication** to articulate the importance of diversity and inclusion at Arup, to both staff and clients
- We must provide access to the latest thinking around the diversity and inclusion agenda and debunk myths

### Previous and on-going activities

- There is a diversity intranet site with links to relevant policies, strategies and information on the Connect networks
- There is a diversity and inclusion section on the bid support intranet page

### New activities

- Refresh diversity intranet pages to ensure they are up-to-date
- Undertake a review of current bid support material available to ensure it meets procurement standards. This will include communicating bid winning/losing information on a regular basis

- Inclusive Attraction and Recruitment – improving our communication to potential recruits
- Similar to Arup Thoughts, release regular ‘debunking the myths’ papers on the diversity and inclusion intranet page as a way of reporting progress and stimulating discussion e.g. ‘Why do people leave Arup?’, ‘How many women do we have at senior level? Why is there an imbalance?’, ‘Why are there not more black leaders in Arup?’

### Measurement

- Intranet site to be updated regularly (at least every 2 months)
- Review of bid support material to have taken place by July 2015
- Review of internet pages relating to diversity and inclusion
- Report whether papers have been written and uploaded



## Contacts and references

The members of the team responsible for delivering the UKMEA region diversity and inclusion strategy plan are shown below.

### Diversity Team Contacts

General enquiries:  
[diversity@arup.com](mailto:diversity@arup.com)

Diversity and Inclusion Champion:  
[Martin.Radley@arup.com](mailto:Martin.Radley@arup.com)

Diversity and Inclusion Programme Manager:  
[Vicky.Evans@arup.com](mailto:Vicky.Evans@arup.com)

Region Chair:  
[Alan.Belfield@arup.com](mailto:Alan.Belfield@arup.com)

# Diversity and Inclusion: code of practice

## PURPOSE

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Arup recognises that to produce work of high quality, to maintain our reputation for innovation and creativity and to understand and delight our clients we need to fully embrace the skills, abilities and knowledge that only a diverse and inclusive workforce can deliver.

We are committed to promoting the value of diversity, equality and inclusion throughout the business. With a view to eliminating discrimination and improving opportunities for people regardless of their background or circumstances, whether through recruitment, retention, career progression, reward or learning and development.

## CODE OF PRACTICE

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As a global organisation, we recognise and respect each others' differences and strive to build a working environment where our different values and perspectives are actively harnessed to create the best solutions for our equally diverse client base.

The firm intends to treat everyone equally and with the same attention, courtesy and respect regardless of their age, disability, gender identity/gender reassignment, marriage/civil partnership, pregnancy/maternity, race, religion or belief, sex, sexual orientation, part time working, flexible working or fixed term working.

The diversity and inclusiveness of our workforce is supported by our ethics on Sustainability and Human Rights.

Our employment practices will adhere to, and strive to exceed, local legislation wherever we work in the world.

## EFFECTIVE DATE

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October 2015

## APPLICABILITY

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All staff working for Arup worldwide, and others engaged by the Firm in any capacity, clients, candidates and other third parties.



# Grievance UK Procedure

## Introduction

Arup believes that all employees should be treated fairly and with respect. If you are unhappy about the treatment that you have received or about any aspect of your work, you should discuss this with your manager, who will attempt to resolve the situation on an informal basis. If you feel unable to approach your manager directly, you should approach a member of the HR Team who will discuss ways of dealing with the matter with you.

Where attempts to resolve the matter informally do not work, it may be appropriate for you to raise a formal grievance under this procedure. A formal grievance should be concerned with the way in which you believe you have been treated by the firm or managers acting on its behalf, or about any aspect of your work.

If your complaint relates to bullying or harassment on the part of a colleague, the matter should be dealt with under the Dignity at Work policy. Complaints that amount to an allegation of misconduct on the part of another employee will be investigated and dealt with under the Disciplinary procedure.

Grievances may be concerned with a wide range of issues, including the allocation of work, your working environment or conditions, the opportunities that you have been given for career development or the way in which you have been managed. However, issues that are the subject of collective negotiation or consultation with Airtime will not be considered under the Grievance procedure.

Complaints that you may have about any disciplinary action taken against you should be dealt with as an appeal under the Disciplinary procedure.

Grievances raised while you are subject to disciplinary proceedings will usually be heard only when the disciplinary process has been completed. Insofar as a grievance has any bearing on the disciplinary proceedings, it can be raised as a relevant issue in the course of those proceedings.

## Mediation

It may be appropriate for the matter to be dealt with by way of mediation, depending on the nature of your grievance. This involves the appointment of a third-party mediator, who will discuss the issues raised by your grievance with all of those involved and seek to facilitate a resolution. Mediation will be used only where all parties involved in the grievance agree.

## The right to be accompanied

You may be accompanied by a fellow worker or Airtime representative at any grievance hearing or subsequent appeal.

The choice of companion is a matter for you. Please note that individual workers are not

obliged to agree to accompany you. Companions will be given appropriate paid time off to allow them to accompany colleagues at a grievance hearing or appeal hearing.

## **Role of the companion**

At any hearing or appeal hearing, your chosen companion will be allowed to address the meeting, respond on your behalf to any view expressed in the hearing, and sum up the case on your behalf. However, both the hearing and appeal hearing are essentially meetings between the organisation and you, so any questions put directly to you should be dealt with by you and not your companion.

Where the chosen companion is unavailable on the day scheduled for the meeting or appeal, the meeting will be rescheduled, provided that you can propose an alternative time within five working days of the scheduled date.

## **Accessibility**

If any aspect of the grievance procedure causes an employee difficulty on account of a disability, or if assistance is needed because English is not the employee's first language, this should be raised with a member of the HR Team, who will make appropriate arrangements.

## **Recording the hearing**

In order to encourage open and transparent discussion, Arup does not permit the electronic recording of grievance hearings, unless it has been agreed as a reasonable adjustment in relation to a disability, in advance of the hearing. Making recordings in breach of this procedure will be grounds for disciplinary action.

Notes will be taken during the hearing, a copy of which may be provided to the employee upon request.

## **Conducting the Grievance procedure**

Arup recognises that a formal grievance procedure can be a stressful and upsetting experience for all parties involved. Everyone involved in the process is entitled to be treated calmly and with respect. The firm will not tolerate abusive or insulting behaviour from anyone taking part in or conducting grievance procedures and will treat any such behaviour as misconduct under the Disciplinary procedure.

## **Formal Grievance procedure**

### **Making the complaint**

The first stage of the grievance procedure is for you to put your complaint in writing. This written statement will form the basis of the subsequent hearing and any investigations, so it is important that you set out clearly the nature of your grievance and indicate the outcome that you are seeking. If your grievance is unclear, you may be asked to clarify your complaint before any meeting takes place.



Your complaint should be headed "Formal grievance" and sent to your manager. If your complaint relates to the way in which you believe your manager is treating you, the complaint may be sent to your HR Business Partner.

Further attempts may be made to resolve the matter informally, depending on the nature of your complaint. However, if you are not satisfied with the outcome, you may insist on the matter proceeding to a full grievance hearing.

Before proceeding to a full grievance hearing, it may be necessary to carry out investigations of any allegations made by you, although the confidentiality of the grievance process will be respected, wherever possible. If any evidence is gathered in the course of these investigations, you will be given a copy long enough in advance of the hearing for you to consider your response. In exceptional circumstances, the evidence given by individuals may have to remain confidential. Where confidentiality is necessary, this will be explained to you and an appropriate summary of the evidence gathered will be given to you.

### **The Grievance hearing**

The hearing will be held without unreasonable delay. It will be conducted by your manager (unless the grievance is about your manager) and attended by a representative from the HR Team. At the meeting, you will be asked to explain the nature of your complaint and what action you feel should be taken to resolve the matter. Where appropriate, the meeting may be adjourned to allow further investigations to take place.

You should ensure that you attend the meeting at the specified time. If you are unable to attend because of circumstances beyond your control, you should inform your manager as soon as possible. If you fail to attend without explanation, or if it appears that you have not made sufficient attempts to attend, the hearing may take place in your absence.

While you will be given every opportunity to explain your case fully, you should confine your explanation to matters that are directly relevant to your complaint. Focusing on irrelevant issues or incidents that took place long before the matters in hand is not helpful and can hinder the effective handling of your complaint. The manager conducting the hearing will intervene if they think that the discussion is straying too far from the key issue. The manager may also intervene to ensure that the meeting can be completed within a reasonable timeframe, depending on the nature and complexity of your complaint.

Following the meeting, you will be informed in writing of the outcome without unreasonable delay and told of any action that the firm proposes to take as a result of your complaint. You may discuss this outcome informally with either your manager or HR Business Partner.

If you are dissatisfied with the outcome, you may make a formal appeal.

### **Appeal**

Your appeal should be made in writing to a Senior HRBP or the Director of HR. You should clearly state the grounds of your appeal, i.e. the basis on which you say that the result of the grievance was wrong or that the action taken as a result was inappropriate. This should be done within five working days of the written notification of the outcome of the grievance. An appeal meeting will be arranged to take place without unreasonable delay.

You should ensure that you attend the meeting at the specified time. If you are unable to attend because of circumstances beyond your control, you should inform your manager of this as soon as possible. If you fail to attend without explanation, or if it appears that you have not made sufficient attempts to attend, the hearing may take place in your absence.

The appeal hearing will be conducted by a Director who has not previously been involved in your grievance, who will consider the grounds that you have put forward and assess whether or not the conclusion reached in the original grievance hearing was appropriate.

Following the appeal meeting, you will be informed of the outcome without unreasonable delay. The outcome of this meeting will be final.

## **Roles and responsibilities**

**The HR Team** is available to provide advice and guidance in respect of employment law, procedure and process to all members involved in the use of this policy and procedure. An HR Team representative will attend any meetings addressing an appeal.

**Managers** are responsible for notifying the HR Team when a formal grievance is raised and for keeping the HR Team informed, and involved as necessary, throughout the process.

All information in relating to a formal disciplinary procedure will be held confidentiality on an employee-personal file.

## **Review of this procedure**

This procedure will be monitored periodically by Arup and will be updated in accordance with changes in law. This procedure is not contractual and can be amended by the firm at any time.

## **Legislation relating to this procedure**

The following is only a guide to the legislation that impacts on this procedure and is not a comprehensive list:

Employment Rights Act 1996  
Employment Relations Act 1999

## **Policy owner**

Diane Thornhill, HR Director for UKMEA



# Sustainability Policy

## Mission

To shape a better world

## Objectives

The firm will implement practices that promote economic security, social betterment and environmental stewardship and will strive for continuous improvement of performance in these areas.

To deliver this, the firm aims to:

- set a sustainability strategy for the firm
- be a leader in sustainable development in areas relevant to its business
- work with its clients to pursue, promote and develop sustainable business outcomes; promote sustainable practices
- use its skills and influence to improve the built environment and to maintain the integrity and quality of the natural and cultural environments
- hold its performance accountable to its staff through objective measurements; report on its sustainability performance and achievements
- operate within a management system that is registered as meeting the requirements of ISO 14001

## Outcomes

In meeting these objectives, the firm will:

### For its core business

- comply with legal and other requirements that relate to its environmental aspects
- provide value to clients by building upon its reputation for integrated design and a holistic approach to projects
- deliver projects recognised for their sustainability credentials, in line with client expectations
- evaluate projects with respect to their sustainability risks and opportunities and, where appropriate, work with the client to deliver a more sustainable outcome
- achieve performance that ensures the firm's economic, environmental and financial viability

## For its people

- employ and retain staff who have a high degree of awareness and expertise in sustainability for all disciplines practised
- provide ongoing education and training for all staff on sustainability issues relevant to the firm's business
- support innovative approaches to the implementation of sustainability strategies on projects

## For its facilities

- endeavour to prevent pollution
- aim to use resources efficiently and to minimise waste, usage of water, energy and other consumables
- implement a strategy to move towards minimising carbon emissions in its operations
- implement a strategy for the firm to move towards sustainable procurement of the goods and services used in its operations

## For its external relationships

- engage with organisations that practise sustainability and that enable the exchange of ideas and the promotion of sustainability leadership across its businesses
- implement a strategy to work on community projects that achieve sustainability goals

Mahadev Raman

Arup Group Sustainability Director

[www.arup.com](http://www.arup.com)



ARUP

UK, INDIA, MIDDLE EAST & AFRICA OFFICES

# Sustainability Report 2017/18





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**FRONT COVER IMAGE:**  
Mahindra World City in Jaipur, India demonstrates that expansion can be an opportunity to enhance sustainability, resilience and liveability.



FOREWORD

# Sustainability Report 2017/18

Welcome to our sixth annual Sustainability Report, which shows the wide range of issues we influence as part of our broad project portfolio and how we have sought to improve social and environmental outcomes.

Over the past 12 months we have strengthened our alignment with the UN Sustainable Development Goals (SDGs), appointing a new Global Sustainable Development Leader, Jo da Silva, to bring about a step-change in all areas of our work, building on our decades-long focus on sustainability issues.

Part of this shift is the development of processes which will identify where significant projects can positively influence sustainable development outcomes, using the SDGs and their underlying targets as drivers for improvement. Through this we will identify actions that can be implemented within projects to bring innovative solutions that resonate with clients’ priorities.

We continue to draw on our expertise and experience to provide thought leadership in these areas. This report, for example, includes reference to the widely acclaimed ‘Cities Alive: Designing for Urban Childhoods’ report which provides a fresh new perspective on urban design aimed at inclusivity for all. A child-friendly city design will lead to a successful, sustainable, healthy city.

Also included is a feature on the excellent work of our International Development team. This specialist business within Arup partners with development and humanitarian organisations to tackle some of the most pressing problems the world is facing, such as combating poverty, climate change resilience for vulnerable people and responses to natural disasters.

Once again, this report has been prepared to align with the Sustainability Standards of the Global Reporting Initiative (GRI). It covers work in the 17/18 financial year and includes projects carried out by our UK, Middle East and Africa offices. It shows just a small selection of the ways in which we continue the vision of our founder, Ove Arup, and builds on our recent biennial Region Forum (centred around social purpose) which examined how we can strengthen our focus on placing this vital issue at the core of our work.

**DERVILLA MITCHELL**  
UKIMEA Region Chair, Arup





# Sustainable Development at Arup

Sustainability is a journey. Emerging understanding, changing priorities and increasing urgency challenge us to constantly evolve and improve our approach. At Arup we are deepening our commitment to the UN Sustainable Development Goals (SDGs) as a framework. Our aim is that all projects can demonstrate progress against the SDGs, using them to test for negative impacts that must be mitigated and helping to guide us towards new opportunities where we can have a meaningful impact. The breadth of our expertise provides our clients with the skills and perspectives that make this possible.

As well as working directly in specialist areas that directly impact specific SDGs (such as ecology or energy systems) we recognise that, collectively and through total design, we can have a greater influence on all our projects. To realise this influence, we need for every member of staff to engage with and understand the goals and their underlying targets so that they can meaningfully contribute. As such, we have developed awareness-raising training on the SDGs for all staff.

We are rapidly building on our experience of applying the SDGs to projects. This includes projects that directly target the goals, developing schools or hospitals for example, as well as applying them to wider projects to realise multiple benefits such as in the masterplanning of a 180-hectare development zone in in Jaipur, India (a project featured on p.16 of this report).

Social purpose, quality and total design are defining values at Arup and the objective that brings us together is shaping a better world. Aligning ourselves with the SDGs will positively influence every aspect of our business from the clients’ projects we engage with, to how and what we design and how we evaluate our performance. We are excited by the tangible positive outcomes for society from working in this way.

**NIGEL TONKS**  
UKIMEA Region Sustainable Development Director, Arup

**JO DA SILVA**  
Global Sustainable Development Leader, Arup





SUSTAINABILITY REPORT 2017/18

# Healthy living & improved wellbeing

Modern lifestyles and workplaces mean the majority of people spend most of their time indoors. So the built environment has an important role to play in helping individuals, organisations and communities to thrive. At Arup we understand this, and we help the built environment fulfil its potential to promote health and wellbeing.

Related UN SDGs:







### THE BIGGER WELLBEING PICTURE

A company’s workforce typically accounts for 90% of its operating costs. So isn’t it obvious that, as well as being good for people, designing commercial offices to enhance wellbeing makes financial sense? Maybe, but to make a compelling business case you need to be able to demonstrate the financial case for good design.

A new methodology for measuring wellbeing has been developed through Arup-funded research at the University of Manchester. We put it to the test to discover what difference a new office in Sheffield has made to our people.

The new office in St Paul’s Place includes features such as flexible and collaborative breakout zones with advanced acoustic engineering, which help create a sociable

environment and reduce disruption to employees.

Has the design improved wellbeing? To find out, we surveyed staff three times: before the move, six, and 12 months afterwards – to account for any initial ‘wow’ factor. The surveys measured different aspects of psychological wellbeing. We also used the Building User Survey post-occupancy methodology, gathering qualitative opinions to contextualise the quantitative data.

The overall wellbeing score for the Sheffield office increased substantially, from 17% before the move to 50% six months afterwards. Twelve months after the move, the score was still 44%, which suggests significant long-term wellbeing impacts beyond the initial ‘wow’ factor. The

results show that happiness increased from -3% before the move to 42% 12 months afterwards.

In their new office, our Sheffield team feel good and function better – proving the long-term business case for investment in design that promotes wellbeing. The increase in self-reported wellbeing represents a social return on investment of £177,000 per year through mental health gains.

### GREEN SPACE BENEFITS

How can you promote the benefits of green space in urban areas? To answer this question, we funded and designed a pop-up green space in Kirkgate Indoor Market, Leeds. Built for the Leeds Indie Food Festival 2017, an annual 5-week, city-wide festival of independent food and drink culture, The Allotment gave visitors

a place to relax and enjoy eating in a location where food is grown, prepared, cooked and sold. It provided a creative haven with free events and activities, hosting concerts and cooking demonstrations, lectures and play events for children.

Our design for The Allotment incorporates bespoke modular units, digitally fabricated and laser cut from plywood, to form seating and planters. We collaborated with local architects, Bauman Lyons, to provide a construction system that enabled the modules to be assembled and dismantled easily by volunteers without the need for specialist equipment. The modules were planted with an abundance of herbs, vegetables and other edible plants as well as fruit trees.

The Allotment has shown how a fast, low-cost project can make a big impact. Andrew Cooper, Chief Executive of LeedsBID, said:

*“This interactive and innovative allotment demonstrates how public places can be transformed to create dynamic spaces by various organisations working together.”*

Originally designed as a temporary installation to be in place for the festival period, it proved so popular that it has been made a permanent feature.

**IMAGES**  
Previous page - Allotment park, Kirkgate Market. Above - Arup Sheffield Office and Allotment park, Kirkgate Market.



# Water resource management & efficiency of use

Water is essential for drinking, for agriculture and for industry. So having either too much water or too little can have major consequences. Today, population growth, climate change and increasing demand are causing problems such as flooding and droughts. This is why Arup focuses on water, working across the water cycle to develop vital green and grey infrastructure to manage water resources.

Related UN SDGs:







**SUSTAINABLE  
WASTEWATER CATCHMENT**

As the UK’s ageing sewer networks come under increasing pressure, water pollution is a growing risk. In Llanelli, overloaded sewers were discharging too much wastewater into the environmentally sensitive Loughor Estuary.

Reducing discharges from combined sewers, where rainwater and wastewater is mixed, would traditionally involve building storage tanks and more treatment capacity. Together with our partners in the Dŵr Cymru Welsh Water Delivery Alliance, we came up with a more sustainable and cost-effective approach.

First, we recommended investing £60m in retrofitting 20% of the town’s impermeable area with green and grey infrastructure to reduce run-off into the sewers. This cuts peak flow by

6,000 litres per second and means there’s no need to pump 1.5 million m<sup>3</sup> of rainwater every year, saving over £200,000 and 27 tonnes of CO<sub>2</sub>.

We also helped Llanelli’s residents keep surface water out of the combined sewer and to reuse water in their homes. People were given free water butts, plus advice and funding to create their own rain gardens. Some local residents even had separate rainwater drainage systems designed for them.

Investing £20m in smart sewers that use sensors and weather forecast data to optimise flow in the network will enable over 50,000m<sup>3</sup> of existing storage to be used at a fraction of the cost of building new. The smart systems detect where pockets of storage are available in the Network and direct wastewater to these locations.

Finally, investing £20m in groundbreaking peak flow equivalent treatment technology saved 75% on capital costs compared to traditional storage. Overall, this investment will prevent flooding at over 100 homes and reduce Dŵr Cymru Welsh Water’s impact on rivers by over 95%, helping to protect the Loughor Estuary.

**COLLABORATING TO  
FUTURE-PROOF DRAINAGE**

Engineering solutions for managing water resources often create opportunities to realise wider social, economic and environmental benefits – if different organisations work together to unlock them. In the Grangetown area of Cardiff, a unique partnership has future-proofed the drainage network, and improved ecology and biodiversity, enhancing public spaces and promoted sustainable travel. The Greener Grangetown project, a partnership

between Cardiff Council, Dŵr Cymru Welsh Water and Natural Resources Wales promotes water as a resource to be valued.

Along 12 residential streets, rainwater run-off from roofs and roads is diverted into 108 rain gardens, which naturally cleanse the water before it is discharged to the nearby River Taff. In total the gardens create 1,700m<sup>2</sup> of green space along 2.2km of roads.

The project regenerated areas of public realm that were prone to anti-social behaviour. It has also improved access and safety for people walking and cycling at 14 road junctions and along 555m of the Taff Trail, the busiest cycle route in Wales.

Residents were involved in shaping the design, which creates green-blue corridors of plants and

water, and features more than 120 new trees of 19 different species.

As a result of the Greener Grangetown scheme, surface water from a 4.4-hectare area no longer enters the combined sewer network. This means that 40,000m<sup>3</sup> less water is pumped and treated each year, reducing energy consumption, operational costs and CO<sub>2</sub> emissions. The unique partnership between organisations has shown how managing surface water sustainably can also deliver wider benefits.



**IMAGES**  
Previous page - Greener  
Grangetown; Above - Llanelli and  
Greener Grangetown.



# Clean & efficient energy generation & delivery

With the world increasingly hungry for energy, issues of energy security, sustainability and affordability are coming to the fore. Tackling this energy ‘trilemma’ requires approaches sympathetic to each country’s stage of development, and which consider generation, efficiency and storage. These are the principles that guide us as we target the areas where we know we can make a real difference.

Related UN SDGs:







### GEOTHERMAL INNOVATION

Geothermal heat can play an important role in solving the energy ‘trilemma’ of energy security, sustainability and affordability. Yet while countries such as Iceland are synonymous with geothermal energy, the potential of this low-carbon heat source in countries like the UK has gone largely untapped – until now.

A 1.4km deep geothermal well, being drilled in Penzance, Cornwall, will soon enable visitors to the town’s Grade II listed Art Deco seafront lido, the Jubilee Pool, to enjoy swimming outdoors in waters of around 35°C. A small pump will draw up water that has been heated by the surrounding ground – providing around 400kW of heat supply. This heat will then be transferred to treated seawater in adjacent pipes that flow into the pool.

The innovative project is a result of Arup’s venturing initiative, which combines the firm’s depth of skills with entrepreneurial spirit to commercialise new ideas. Geothermal Engineering Ltd (GEL) is undertaking the project after it secured a licence from Geon Energy, a joint venture company set up by Arup and GEL, for some of the technology used. Funding is coming from the European Regional Development Fund.

When the heated section of the pool opens in 2019, it will give swimmers an alternative to the chilly seawater in the main section, bringing more tourists and investment to Penzance. The opening will also mark the culmination of a long process that has seen Arup and GEL overcome regulatory and planning hurdles



to pioneer the commercial application of geothermal heat in the UK and demonstrate its potential for wider commercial and industrial applications.

### POWERING A SUSTAINABLE UNIVERSITY

Not everywhere has access to geothermal heat sources, but other opportunities exist to integrate low-carbon energy provision.

The University of Sheffield is aiming to cut its carbon emissions by 43% from 2005 levels by 2020. To help achieve this, the university’s new Faculty of Social Sciences building – due to be completed in 2021 – had to be highly efficient and sustainable while blending in with the largely residential area of Broomhill.

Our design for this significant building uses heat pumps connected to a large ground-source borehole array, supplemented by a combined heat and power plant, to provide up to 700kW of low-carbon heating and cooling. Building services are designed to provide optimum conditions for occupants even considering the lower heating and higher cooling temperatures generated by heat pumps – by specifying larger fan coils, for example.

In the future, a very-low-temperature heat network will connect to a proposed sports centre across the road. Low carbon heat left over from cooling the social sciences building will be available to be used to heat the pool.

Crucially, our design balances the heat taken out and put into the ground over the course of the year. Something that’s often overlooked in ground-source systems, this balancing avoids changing the temperature of the ground over time, a side-effect that can reduce performance.

With the UK electricity grid expected to decarbonise over the next 25 years, carbon emissions from the electric heat pumps will decrease over time, providing the university with a low-carbon energy source that steadily reduces its reliance on fossil fuels.

**IMAGES**  
Previous page - University of Sheffield Social Sciences;  
Above - Jubilee Pool and University of Sheffield Social Sciences.





SUSTAINABILITY REPORT 2017/18

# Positive development & growth

The last ten years have seen marked progress in reducing poverty, yet roughly half the world's population still lives on the equivalent of about US \$2.50 a day. To promote inclusive and sustainable development, broader and deeper economic growth is required without increasing environmental pressure. By applying our expertise to engineering and development projects, we help make this happen – bringing lasting benefits to communities around the world.

Related UN SDGs:







## REJUVENATING INFRASTRUCTURE FOR THE COMMUNITY

Sometimes, it is the oldest parts of cities that offer new opportunities. Carefully reimagining existing infrastructure can create wider value for communities.

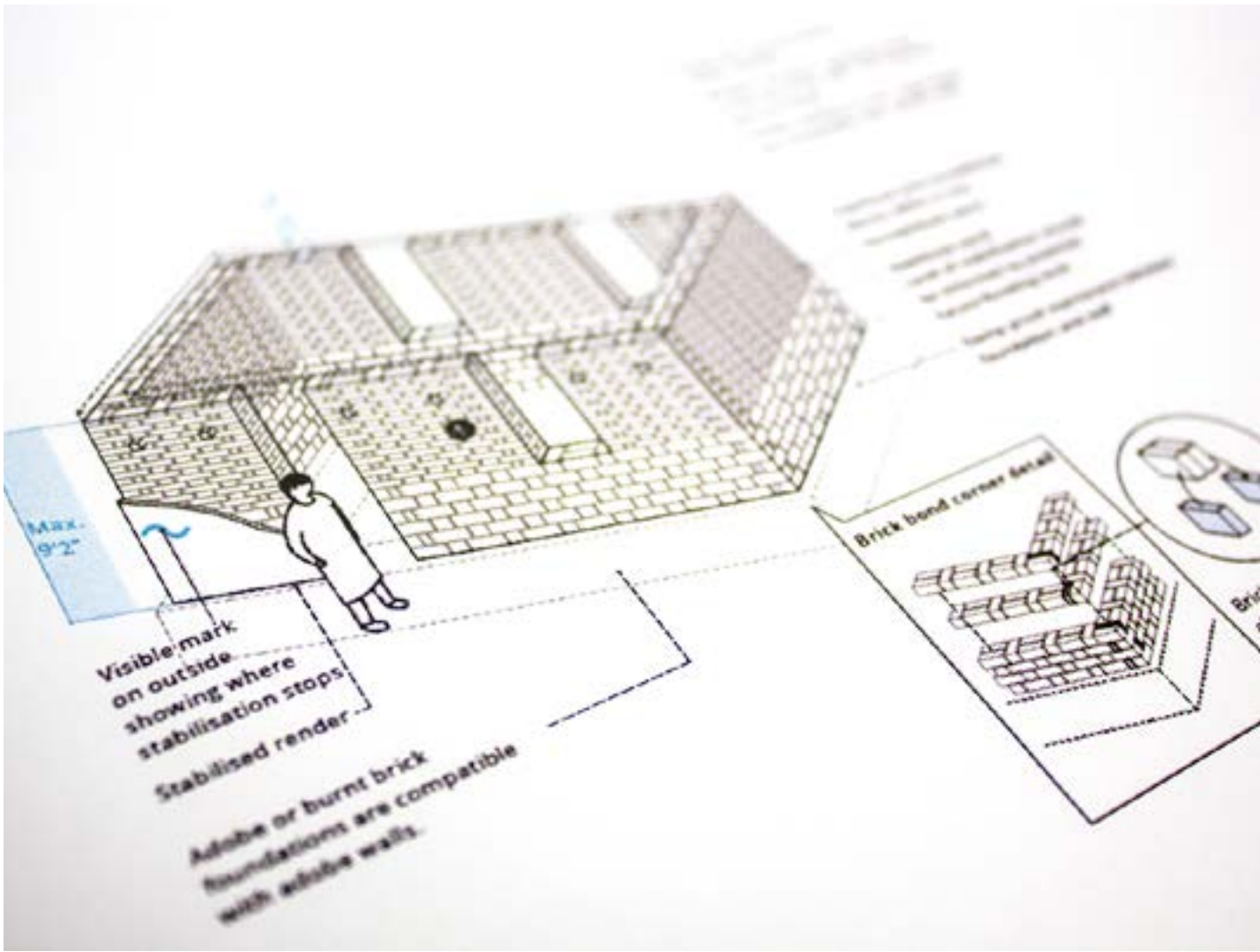
In Port Elizabeth, South Africa, the historic port cuts residents off from easy access to the water. It also faces competition for freight traffic from a newer, deeper port nearby. The port authority wanted to address these two issues by creating a greener and more sustainable ‘people’s port’ that would reintegrate the area, while creating skilled jobs and retaining the cargo operations that are still profitable.

We optimised land use across the 180-hectare site for a new mixed-use development, which will contain commercial, housing, recreational

and green space. Crucially, it will also create a new maritime school and training facility to help provide a career pathway for local people. This will make the area more economically and socially sustainable.

Environmental sustainability was equally important. The framework we created addresses themes such as waste, water quality and energy management. We developed green port planning principles for the transition from business-as-usual operations to a more sustainable future. These cover immediate, low-cost actions and longer-term aspirations.

For example, over the course of the project, polluting operations such as the manganese terminal will be moved away to the deep-water port. In the shorter-term, we recommended water-sensor technology that will alert the port



manager to any pollutants. With architects now using our land-use study to draw up parameters for the new development, the port’s transformation is underway.

## SHELTERS THAT CAN WITHSTAND FLOODING

While large-scale transformations like Port Elizabeth’s are long-term projects, many communities find themselves in need of more urgent reconstruction – often in the wake of natural disasters.

Since 2010, extreme flooding in southern Pakistan has affected 35 million people, damaging or destroying 2.5 million homes. In response, aid organisations have built 200,000 shelters for the very poorest households, and many other people have built their own.

But with limited technical guidance and extremely tight budgets, it was unclear which designs and materials would best withstand future flooding. Our research for the International Organization for Migration Pakistan and the UK Department for International Development has changed that.

To assess and improve shelter design, we carried out 800 field surveys, conducted desk studies and tested 24 full-scale wall panels. Our study focussed on flood resilience and structural performance, cost, building comfort and lighting levels, carbon footprint and environmental impact.

We found that shelters made from earth mixed with a little Portland cement or lime can resist low- to medium-scale flooding at least as well as those made of fired bricks.

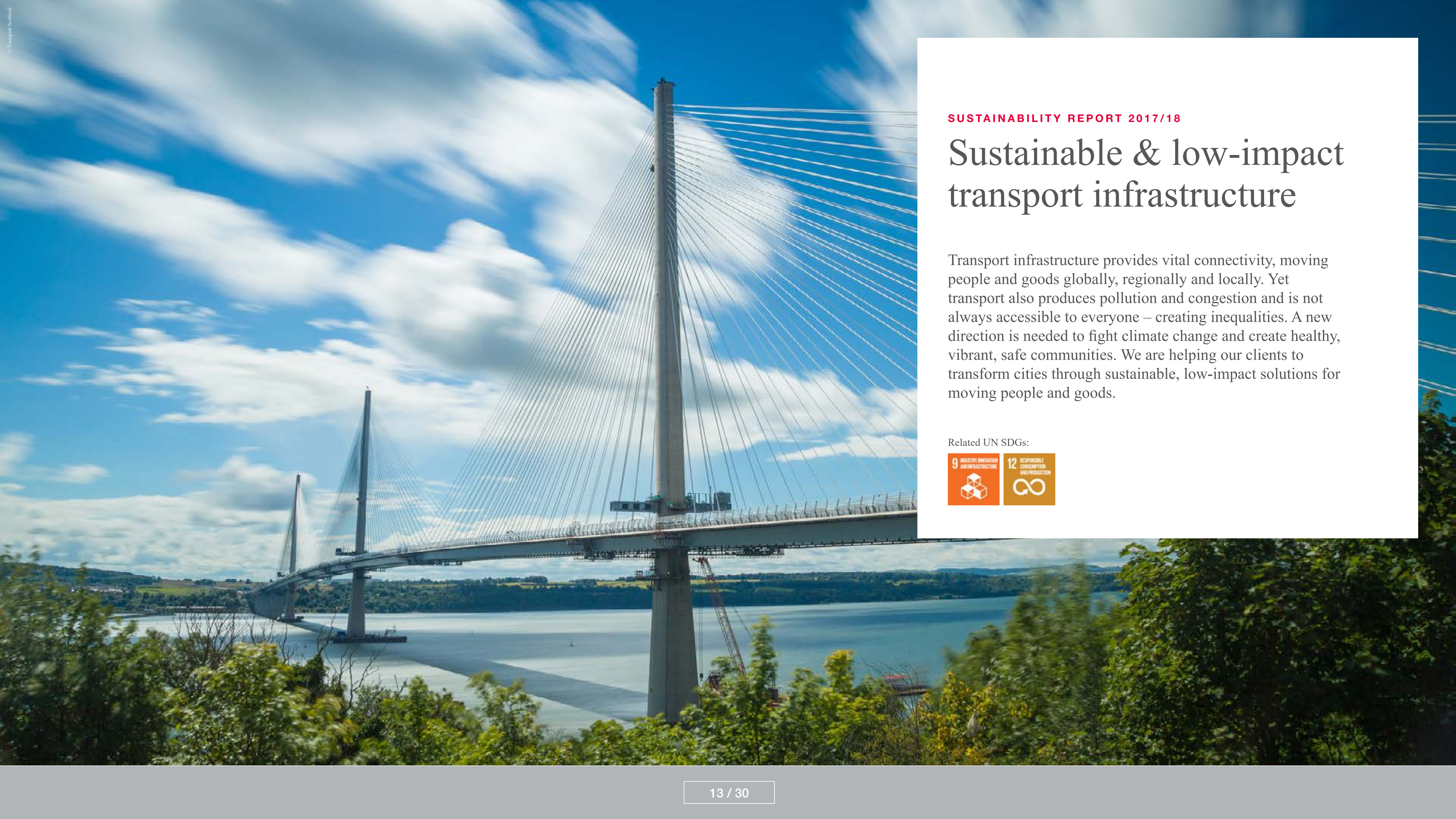


This ‘improved earth’ option also has 85% less embodied carbon than a brick shelter, and doesn’t require trees to be cut down to fuel the brick kilns. What’s more, it’s cheaper and can be repaired easily by the homeowner.

Using these findings, we created the evidence-based Pakistan Shelter Guide with best-practice shelter designs and a decision-making tool. It empowers donors, shelter agencies and the communities they serve to construct sustainable, flood-resilient shelters.

**IMAGES**  
Previous page - Port Elizabeth;  
Above - Port Elizabeth and Flood  
Shelter Pakistan.





SUSTAINABILITY REPORT 2017/18

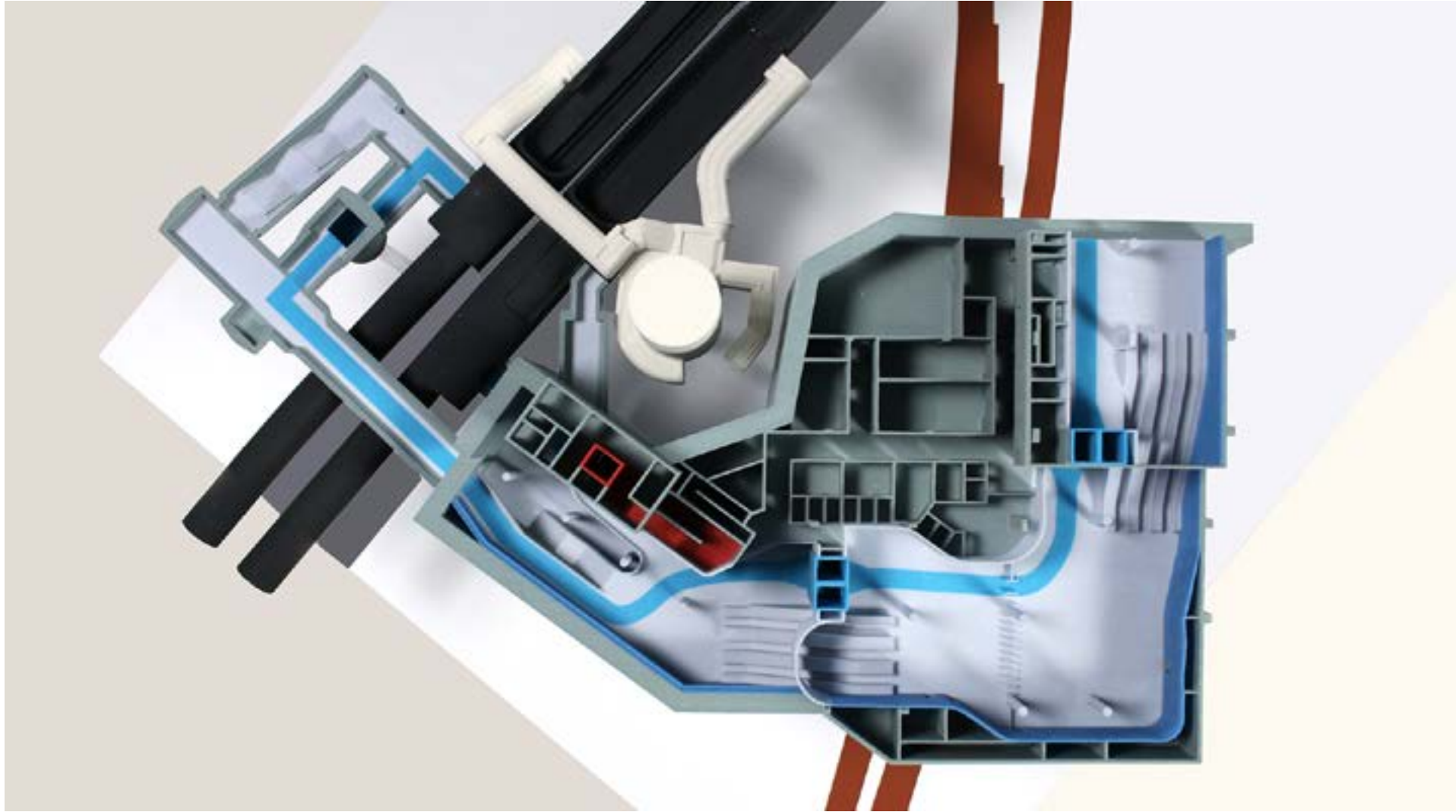
# Sustainable & low-impact transport infrastructure

Transport infrastructure provides vital connectivity, moving people and goods globally, regionally and locally. Yet transport also produces pollution and congestion and is not always accessible to everyone – creating inequalities. A new direction is needed to fight climate change and create healthy, vibrant, safe communities. We are helping our clients to transform cities through sustainable, low-impact solutions for moving people and goods.

Related UN SDGs:







**INCREASING CAPACITY,  
REDUCING EMISSIONS**

Upgrading existing city metro infrastructure can reduce carbon emissions and air pollution from congested road networks by encouraging people to take public transport. These upgrades also offer a valuable opportunity to spark regeneration.

In London, increasing passenger capacity at Elephant and Castle Underground Station will be the catalyst for a £3bn regeneration project. The upgrade will bring an additional 27,000 passengers to the station at peak times, which could save around one million tonnes of CO<sub>2</sub> every year by taking traffic off London’s busy roads.

Focusing on maximising the carbon and cost benefits, our design for the station

enhancement reduced embodied carbon emissions by 3,500tCO<sub>2</sub>e compared to the original feasibility design – a 25% saving. We achieved this within an underground space that was constrained by the existing station and tunnel layout.

Re-arranging the original escalator and overbridge orientation, re-working the platform connection and realigning the retaining system provided a more efficient use of space. This saved construction materials and logistics. It also reduced the capital cost by up to 16% compared to the feasibility estimate.

We believe that capital carbon emissions can be reduced further by specifying low-carbon materials and by making the construction sequence and logistics more efficient. By the end of concept design, we had already



identified several opportunities to improve the station’s operational efficiency, cutting emissions further. These will be developed at the next stage.

**SUSTAINABLE,  
AFFORDABLE SOLUTIONS**

As well as helping to cut carbon emissions, transport infrastructure can deliver wider social, economic and environmental benefits. In Elephant and Castle, the upgraded underground station will help a revitalised community to thrive. Meanwhile, in Scotland, an efficient new bridge is providing a vital economic lifeline while the old one has been given a new lease of life.

By 2007, deterioration in the Forth Road Bridge’s cables meant it faced being closed for essential maintenance within ten years.

The resulting 55km detour would have had unthinkable economic and environmental impacts. A new crossing was needed, and Transport Scotland mobilised a team to build it in time. In a joint venture with Jacobs, we became involved in every part of the project.

We demonstrated that a new cable-stayed bridge, the Queensferry Crossing, could be built to the necessary timescales and that costs could be reduced from an initial estimate of around £4bn to around £1.6bn at tender award. How did we do it? We demonstrated that the existing bridge still had some life left in it and could remain in use for public transport, walking and cycling. This reduced the width and loading requirements for the new bridge. And a unique crossed cable system provided the stiffness required without adding more material to the towers or deck reducing the environmental impact.

We also took a ‘technology not tarmac’ approach, using Intelligent Transport Systems to keep traffic flowing on the existing roads. This reduces journey times and associated emissions without having to add lanes.

Designed to last 120 years, the Queensferry Crossing and wider road network is set to benefit Scotland for generations to come.

**IMAGES**  
Previous page - Queensferry Crossing; Above - Elephant & Castle Station Capacity Upgrade and Queensferry Crossing.



# Resilient cities people love

By 2050, 70% of the world's population will live in cities. How can these cities support their urban communities in the face of changes to infrastructure, climate and demographics? They must endure, adapt and transform – becoming more resilient. Drawing on our expertise in the research, planning and design of cities, we are shaping great places for people to live and work.

Related UN SDGs:







**PLANNING SUSTAINABLE GROWTH**

Around the world, cities are demonstrating that large-scale expansion doesn’t have to come at the expense of sustainability, resilience, or liveability. In fact, as the Mahindra World City in Jaipur (MWCJ) in Rajasthan shows, expansion can be an opportunity to enhance all these things.

Conceived as a C40 development, we were commissioned by Mahindra to develop proposals to integrate residential and community infrastructure into the existing business cluster. The scheme challenges existing norms around open spaces, mixing of land uses and walkability. MWCJ combines retail, cultural and educational land uses together through new residential communities.

MWCJ is the first project in Asia and the largest project in the world (by population) to receive

C40 Stage 2 ‘Climate Positive Development’ certification. This is in recognition of its detailed plans for reducing energy, waste and transportation-related carbon emissions onsite, and for extending the impact to the surrounding community to achieve a climate positive outcome. We have been working with MWCJ, on helping their development achieve the C40 CPD roadmap goals.

We are masterplanning a residential and social infrastructure zone of approximately 180 hectares at MCWJ, which will integrate with a hi-tech industrial area. Our plan envisages two new universities and up to 25,000 homes in about ten communities, each with its own shaded plaza and local shops.

In Rajasthan’s hot climate, our plan maximises thermal comfort, provides a good environment



for walking and cycling, and reduces building energy use through natural ventilation and effective orientation. Aligning the development with the prevailing wind patterns captures cooling breezes, while colonnades and other structures shade public spaces.

Providing access to nature, the central Nevata Park is structured around a dry water course that stores stormwater during the monsoon. Four green corridors connect to the park, providing stormwater drainage and ensuring people will never be more than a 5-minute walk from an open space.

**FOR CHILDREN, FOR EVERYONE**

Access to open space is important for adults and children alike, and by 2050 the majority of urban inhabitants will still be children. The quality of life experienced by urban populations will determine our global future.

Fundamentally, children want the same things from an urban environment as everyone else: safe and clean streets, access to green space, clean air, things to do, the ability to get around, the freedom to see friends, and somewhere to call home. So a child-friendly approach to urban planning creates inclusive cities that work for everyone.

Arup’s report Cities Alive: Designing for Urban Childhoods inspires a positive response to these challenges, and sets out actions to help create a more child-friendly future – well beyond simply providing playgrounds. With streets and spaces in front of homes making up, on average, at least 25% of a city’s area, it’s these spaces that have the greatest potential to encourage everyday freedoms and social interaction.

The evidence we gathered shows that the

amount of time children spend playing outdoors, their ability to get around independently, and their level of contact with nature are strong indicators of how a city is performing. If cities fail to address children’s needs, they risk economic and cultural impacts as families move away.

Our report draws on 40 global case studies, making 14 recommended interventions and 15 actions for city leaders, developers, investors and built environment professionals. It shows how we can create competitive, resilient, healthier and more inclusive cities for everyone to live, work and grow up in.

**IMAGES**  
Previous page - Designing for Urban Childhoods; Above - Project Pink and Designing for Urban Childhoods.



SUSTAINABILITY REPORT 2017/18

# Responsible consumption & circular production

Under the standard take-make-use-dispose economic model, materials are sourced, made into products, used and then disposed of. The global economy has worked this way since the industrial revolution, but today, as resources dwindle, this largely linear approach is increasingly unviable. Resource-hungry sectors such as the built environment are particularly vulnerable. As a global knowledge partner of the Ellen MacArthur Foundation, we are leading the way in applying circular principles to the built environment.

Related UN SDGs:







## TURNING OLD ASSETS INTO NEW RESOURCES

A circular economy is restorative and regenerative by design. Materials in assets that reach the end of their useful lives find new uses and keep their value. We’ve applied this approach to our firm’s IT Asset Disposition (ITAD) programme.

The advanced design software and other tools we need for our work demand the latest hardware. When products such as computers, displays and mobile devices are broken or no longer useful to us, we now have a unified process for dealing with them – working with electronics reuse and the recycling specialist Sims.

After data has been securely wiped, devices that still function are sold on. When this isn’t

possible, state-of-the-art facilities dismantle products into their raw materials to be reused in new IT equipment. This process reuses 99% of the materials in our devices. What’s more, it’s done locally in facilities that meet high health, safety and environmental standards.

Sadly, this isn’t the norm. Electronic waste can all too easily find itself shipped to developing countries where workers have no option but to use unsafe practices, such as burning, to recover valuable raw materials. Working with Sims gives us the accurate records and destruction certificates we need to be sure this doesn’t happen to our equipment.

Following a circular economy model is good for Arup too. Whereas our previous, ad-hoc, office-by-office approach of disposing of IT

equipment cost the firm money, the global ITAD programme generates revenue we can reinvest. The programme proves that a circular economy approach pays off.

## BEYOND BREEAM, TOWARDS A CIRCULAR ECONOMY

What about applying circular principles to the complex mechanical, electrical and public health (MEP) engineering in a building? Breaking away from conventional approaches isn’t easy, but as part of our work with University College London (UCL) that’s exactly what we’re exploring.

Marshgate 1 will be the first building in University College London’s new campus in the Queen Elizabeth Olympic Park, London. Accommodating approximately 3,000 students

and 625 staff, it will include lecture theatres, laboratories, workshops, cafés and public engagement areas.

UCL has set ambitious sustainability targets and challenged our design team to future-proof Marshgate 1 against climate change while minimising its energy use and carbon emissions. A raft of measures, including sizing the heating and cooling equipment for optimum performance, means our design is set to achieve BREEAM Excellent and a 40% reduction in carbon emissions against building regulations.

We were keen to go further. With UCL’s support, we invested in our own research, using Marshgate 1 to explore five scenarios that demonstrate circular economy principles for mechanical, electrical and plumbing

installations in buildings. For example: what if a client paid a fee for heating and cooling performance, instead of buying the equipment? Would that help close the ‘performance gap’ – a common issue where operational energy efficiency falls short of that expected?

Our team shared its interim findings with a global audience in June at the International Sustainable Campus Network Conference in Stockholm, while publication of the full research results, including estimates of the economic and sustainability benefits of a circular approach, will follow later in the year.

**IMAGES**  
Previous page - UCL East Marshgate; Above - Title of project and location; Arup IT Asset Re-use programme and UCL East Marshgate.



# Carbon reduction & climate adaptation

Today, the impacts of climate change are already being felt as it exacerbates serious hazards such as heatwaves and flooding. The rate of change can be slowed by limiting temperature increases to 2°C, a goal that requires the world to quickly break its addiction to fossil fuels. One of the biggest contributions Arup can make to this goal is designing a low-carbon built environment that can help cities limit and adapt to climate change.

Related UN SDGs:







### ACCOUNTING FOR CONSUMPTION

Detailed carbon emissions data is a vital weapon in the fight against climate change. A new study has, for the first time, enabled 79 of the world’s leading cities to understand how their impact on climate change extends beyond their boundaries.

The study, conducted by Arup, University of Leeds, University of New South Wales and C40, calculated each city’s consumption-based greenhouse gas emissions. The City Consumption-Based Emissions Inventories take into account emissions from the products and services cities consume, such as food or clothing made elsewhere.

If a t-shirt is made in Bangladesh and sold in New York, then, under consumption emissions, we attribute the emissions from its manufacture

to New York rather than to Bangladesh. The study used models to trace connections between cities and the rest of the world, broken down by economic sector.

This approach revealed that consumption emissions from the 79 cities are significant, making up 7% of global annual emissions. In fact, 63 of the 79 C40 cities have more emissions from consumption than from production – the true scale of their impact is under-represented using more common reporting methodologies.

Yet the picture is uneven, with consumption emissions across the 79 cities ranging from 2 to 26 tCO<sub>2</sub>e/capita. This is because wealthy cities such as London, New York and Sydney consume considerably more goods than cities in India, Pakistan, and Bangladesh. The

Consumption-Based Emissions Inventories highlight a close link between consumption emissions and GDP.

The study challenges all cities to address how they can reduce their impact. A follow-up project will recommend achievable targets for consumption emissions.

### ADAPTABILITY WITHOUT COMPROMISE

While cutting carbon emissions can help limit global temperature rise, the built environment also needs to adapt to changes that are already inevitable. In London, a pioneering development is demonstrating that sustainability and adaptability don’t mean compromising on the quality of internal environments – and can actually save money.

Derwent London’s White Collar Factory is a 16-storey tower with a 150m rooftop running track and terrace. It’s a model for a new type of office building offering users greater flexibility, more choice over their working environment, and comfortable, productive spaces.

We spent 10 years shaping the concept, guided by five key principles: high ceilings, a thermal-mass structure, a simple passive façade, flexible floorplates and ‘smart’ servicing. The result: a building that breaks free from mechanical air conditioning and controls its environment passively.

At its heart, in-slab cooling uses the thermal mass of the concrete core to absorb heat energy – made possible by a façade tuned to its orientation that passively limits solar gains

while maximising daylight. Operable windows provide natural ventilation, with a ‘traffic-light’ app that shows users when conditions are ideal to open them. Modelling, analysis and a full-scale prototype showed that these and other passive design measures would cope with future temperature increases.

White Collar Factory uses 33% less energy than building regulations require and has a 25% smaller carbon footprint. It’s also one of only seven projects to achieve both BREEAM Outstanding and LEED Platinum, and is rated EPC ‘A’ and Wired Score Platinum.

#### IMAGES

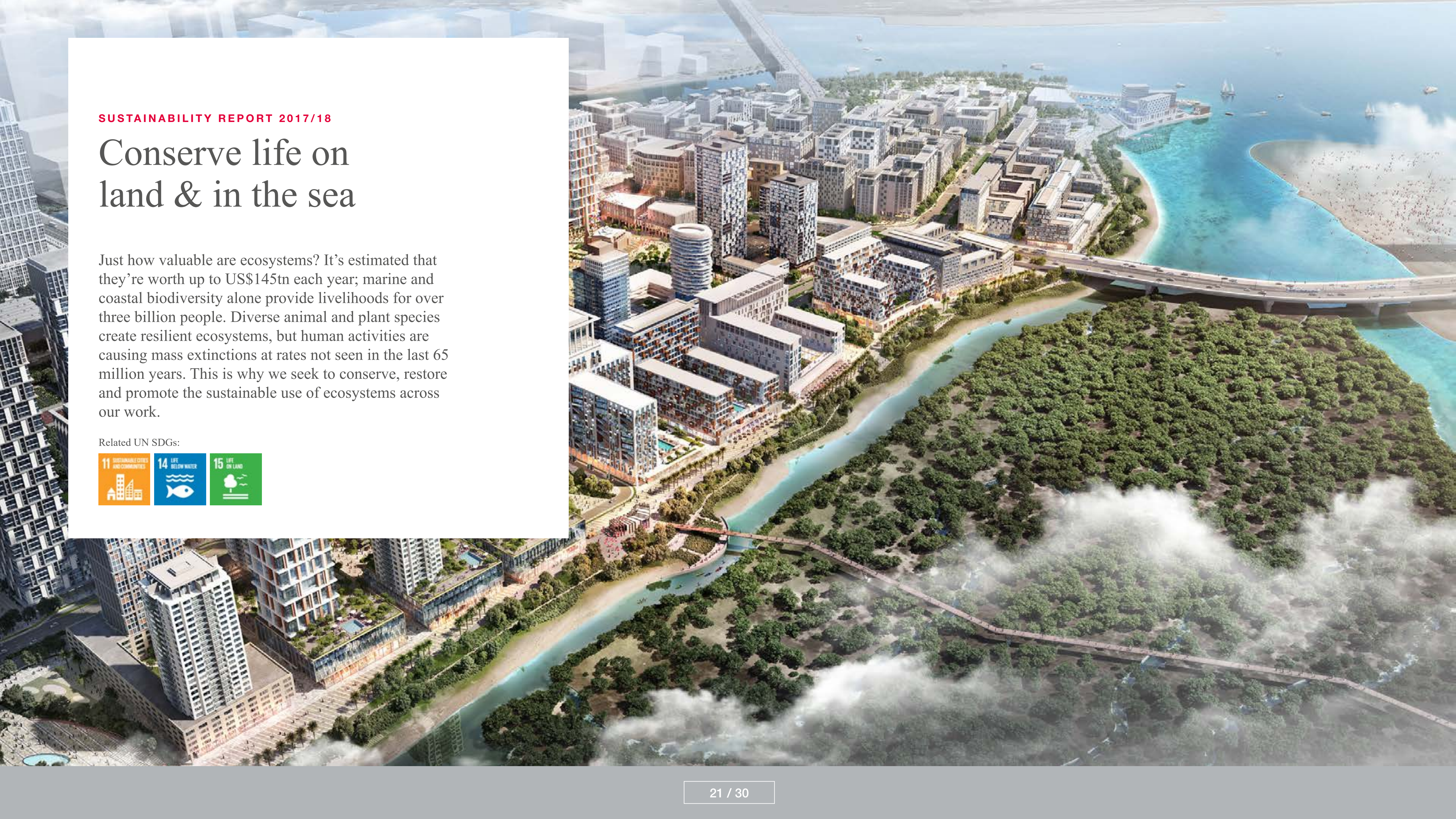
Previous page - White Collar Factory, Old Street Yard; Above - C40 City Consumption Based Emission Inventories and White Collar Factory, Old Street Yard.



# Conserve life on land & in the sea

Just how valuable are ecosystems? It’s estimated that they’re worth up to US\$145tn each year; marine and coastal biodiversity alone provide livelihoods for over three billion people. Diverse animal and plant species create resilient ecosystems, but human activities are causing mass extinctions at rates not seen in the last 65 million years. This is why we seek to conserve, restore and promote the sustainable use of ecosystems across our work.

Related UN SDGs:







**VISUALISING THE VALUE OF TREES**

Healthy trees are an integral part of the urban landscape. Properly managed and planned for, they do more than add colour and beauty to towns and cities. Trees promote mental and physical wellbeing, provide shade and habitats for wildlife, reduce flood risk by absorbing water, mitigate the effects of climate change, remove pollution from the atmosphere and offer fruit for foraging.

To ensure trees retain their rightful place at the heart of urban design and planning, it’s necessary to quantify and communicate their value. In the London Borough of Ealing, we helped experts from Trees for Cities, the local authority, Treeconomics, the Forestry Commission, Forest Research and the Greater London Authority to communicate their results from a groundbreaking study.

We visualised data produced using the open-source i-Tree tool, which assesses tree structure, threats, and benefits. The technical report and microsite we produced highlight the benefits of trees through easily accessible tables, maps, graphs and infographics.

The visualisations show that there are an estimated 234,400 trees in the borough, with an amenity value of £3.4bn. These trees remove over 2,000 tonnes of CO<sub>2</sub> every year, helping mitigate climate change, as well as benefitting local residents in other ways.

The report and microsite will allow Ealing’s residents, politicians, elected members, planners and arboriculturalists to engage with and understand the composition and value of trees. Put simply, it shows where more trees should be planted and why.

The project’s partners hope that they will inform tree management plans, and that other local authorities will carry out similar exercises to understand the importance of their trees.

**ENHANCING A NATURAL ASSET**

With the right approach, large-scale development can create opportunities to enhance ecosystems. Our masterplan for one of Abu Dhabi’s key growth areas retained and enhanced an area of mangroves – salt-tolerant trees.

Our masterplan for the 105-hectare Reem Downtown area of Reem Island creates a walkable new urban district that employs sustainable placemaking to drive behavioural change through measures such as providing shading to over 80% of the streetscape.



We viewed the large area of mangroves that grow to the east of the site in North Bay as an asset, rather than a constraint. These mangroves, which are important nursery areas for many species of fish and protect the coast from erosion and storms, used to be much more widespread in the area.

To safeguard the mangroves, we worked with other stakeholders to relocate a proposed bridge that would have encroached on the area. Our waterfront design proposes soft edges where sea walls are not essential, and a unique transition from urban area to mangroves using a naturalised canal instead of a heavily engineered waterway.

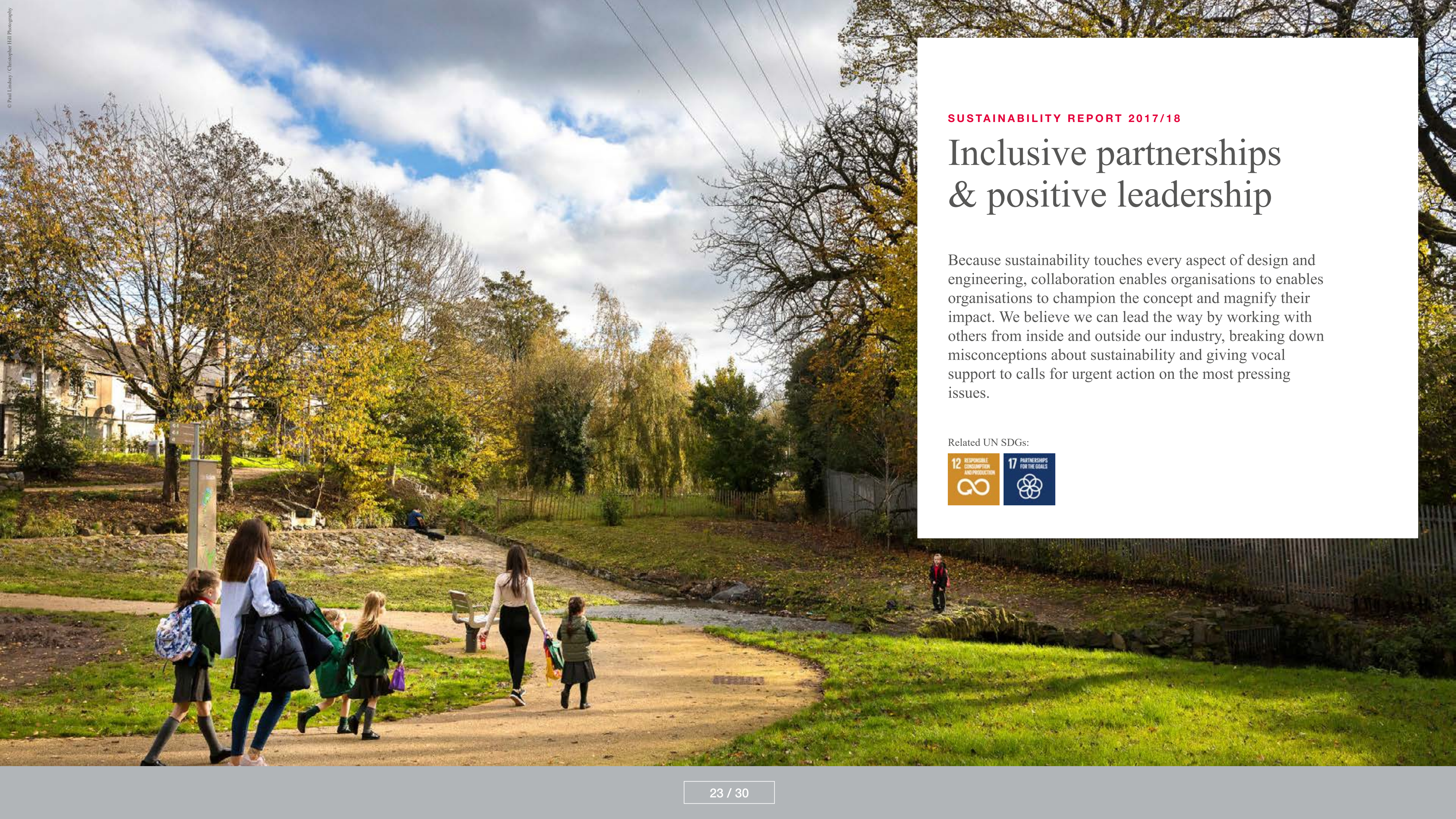
At our suggestion, a Mangroves Education Centre will bring residents closer to nature

and educate them on the value of this unique asset, which they will be able to explore along pedestrian and cycle links.

Our approach now forms an integral part of a mangrove rehabilitation initiative agreed by all Reem Island developers and government authorities.

▲  
**IMAGES**  
Previous page - REEM Downtown;  
Above - Ealing i-Tree Eco and REEM  
Downtown.





SUSTAINABILITY REPORT 2017/18

# Inclusive partnerships & positive leadership

Because sustainability touches every aspect of design and engineering, collaboration enables organisations to enables organisations to champion the concept and magnify their impact. We believe we can lead the way by working with others from inside and outside our industry, breaking down misconceptions about sustainability and giving vocal support to calls for urgent action on the most pressing issues.

Related UN SDGs:







## CHAMPIONING A CIRCULAR ECONOMY

Few agendas are as pressing as the need for a circular economy; making assets to be reused and repurposed again and again preserves dwindling resources and eliminates waste.

Arup is now entering its third year as Knowledge Partner for the Built Environment with leading circular economy charity the Ellen MacArthur Foundation. Our partnership has seen the two organisations learning from each other to help define a circular future for the built environment.

As part of the partnership, we have collaborated on four main projects that examine how to help leaders embed circular economy principles into their cities. Our report, The Circular Economy Opportunity for Urban and Industrial Innovation in China, envisages

applying circular economy principles across urban systems and high-impact industries. It highlights the benefits of circularity amidst rapid urbanisation.

From Principles to Practices aims to accelerate the adoption of circular economy principles in the built environment by clearly demonstrating the value and process of implementing them. Meanwhile, Circular Economy in Cities provides an evidence base to help leaders to embed the circular economy into their cities.

Together with the Foundation, Google and Arup have also launched the Circularity Lab – a demonstration project in New York and the San Francisco Bay area – to illustrate the opportunities and challenges circular design brings to cities and buildings. The Lab will demonstrate new economic models for valuing real estate and showcase technical solutions

for the building industry. These will focus on designing for disassembly, materials innovation and digital solutions for the circular economy.

Our partnership with the Foundation is driving a major shift in mind-set and behaviour across the built environment sector, encouraging the adoption of circular economy principles.

## A GREENWAY TO UNITE A COMMUNITY

Even at a local level, delivering multiple sustainability benefits often requires organisations and communities to work in partnership. The Connswater Community Greenway and East Belfast Flood Alleviation Scheme is one example of this.

As well as protecting 1,700 properties, the £40m project has provided an inspirational living landmark: a green corridor stretching

from the Castlereagh Hills to Belfast Lough alongside the Connswater, Knock and Loop rivers. The project provides a network of open spaces and 16km of continuous, uninterrupted foot and cycle paths to help the local community become more active.

EastSide Partnership developed the greenway, which was delivered by Belfast City Council, with Arup acting as client’s representative to help the council manage construction. Funding came from the Big Lottery Fund, Belfast City Council, the Department for Communities and the Department for Infrastructure Rivers Agency.

From the beginning, everyone involved worked together closely to deliver the vision of a greener and more active future. The project team worked hard to involve the 40,000 local residents as well as pupils and students at the

23 nearby schools and colleges. Local people were given the opportunity to help shape the design and to apply for construction jobs and apprenticeships.

The completed greenway hosts regular community walks, fitness classes and sporting events. Queen’s University Belfast is carrying out a £1m study to evaluate the project’s impact on the physical activity, health and wellbeing of residents. The Institution of Civil Engineers selected the Connswater Community Greenway and East Belfast Flood Alleviation Scheme as one of the 200 most influential projects in the world.



### IMAGES

Previous page - Connswater Community Greenway; Above - Ellen MacArthur Foundation 2017 Summit and Connswater Community Greenway.



# Investing in the future

**ARUP UNIVERSITY**

Looking at the challenges the future holds, we’re always seeking new ways of developing our services and working more efficiently – to continually improve and push new boundaries. Investing in Arup University helps us to do this.

**Informing our thinking**

The university was set up in 2009 to help the firm excel and think about the future. It promotes knowledge development and knowledge sharing – ultimately informing the thinking we apply to our client work. All our staff can use the university’s resources to explore technical and design ideas, and to learn new skills quickly and efficiently.

Arup University is split into four key areas:

- Learning
- Skills and Knowledge
- Information Management
- Foresight, Research and Innovation.

A network of over 400 technical training courses provides employees with core skills and additional learning opportunities. Our 43 cross-

organisational Skills Networks encourage the informal sharing of knowledge across regions and disciplines. In the last year, Arup University also supported 308 research projects, with £3.8m spent globally on research.

**Exploring the future**

The Foresight, Research and Innovation team was established to help our firm and our clients understand the future of the built environment. By exploring the fundamental social, technological, environmental, economic and political drivers of change, we can enable our clients to plan for possible risks and potential opportunities.

The team pioneered the concept of ‘foresight by design’. They use innovative tools and techniques to bring new ideas to life, and to engage clients and stakeholders in conversations about change. Their tools and platforms to support creative thinking, foresight, strategy and innovation programmes include the Drivers of Change Cards, focusing on global issues and trends, and the online Inspire Insights database of emerging ideas.





**INTERNATIONAL DEVELOPMENT**

Maintaining a ‘humanitarian attitude’ in our work is a core principle of our firm and was a focus of the Key Speech, delivered by our founder, Sir Ove Arup, to the company in 1970. International Development has been a specialist group within Arup since 2010, delivering sustainable, resilient and inclusive development projects in emerging markets and fragile contexts.

Partnering our global expertise with organisations such as the Red Cross, Oxfam and Habitat for Humanity, we have delivered over 100 projects in more than 50 countries across Africa, Asia, Latin America and the Caribbean. Together with our partners, we have helped improve the quality, resilience and sustainability of infrastructure projects, increased the wellbeing and resilience of human settlements, responded rapidly to humanitarian crises and natural disasters, and made vulnerable communities more resilient to climate change. We are an advocate for, and help projects to deliver, international agreements such as the United Nations’ Sustainable Development Goals (SDGs), that enshrine quality into international development work.

At the heart of our work are the people and the communities exposed to the unwanted consequences of urbanisation: climate change, large-scale migrations, and poverty. We focus on two key themes aligned to the UN

SDGs: resilient and inclusive urban systems, and resilient critical infrastructure and basic services. We also consider three cross-cutting topics that are critical to the geographies where we operate: climate and environmental action, risk reduction and management, and social inclusion and socio-economic development.

We provide strategic advice to our clients and partners – from high-level strategic planning to physical interventions and programme management. For instance, within the 100 Resilient Cities initiative we supported 23 global cities to develop inclusive and integrated city resilience strategies.

We also provide technical expertise and knowledge across complex urban systems. This included partnering with NGO Salva tu Casa, following the 2017 Mexico City earthquake, to deploy over 50 structural engineers worldwide to undertake virtual initial inspections for over 1,000 damaged buildings.

The training material we develop and deliver, together with our research insights, strengthens the knowledge and capacity of our clients and partners. For example, we’re working with partners to produce a toolkit and guidance document on surface water management, which will benefit practitioners working in humanitarian contexts – particularly in refugee camps.





# Our performance

### OUR IMPACT

We embed sustainable practices into our own operations. Each year we look at where change is needed to improve performance, and how to realise this. This ongoing learning gives us first-hand experience to share with our clients.

Over the last year, employee numbers have increased by approximately 5%, but energy consumption has remained the same. This, coupled with the decarbonisation of the grid, means we have now met our target of 3tCO<sub>2</sub>/employee. Our emissions have more than halved in the last seven years. We are currently in the process of setting a new carbon target following the principles of the Science-Based Target initiative and are investigating ways to provide all our offices with accredited zero carbon electricity whilst also focusing on agile working practices that will enable us to use our estate more efficiently.

- Water use has continued to reduce across our offices. This is thanks in part to proactive building maintenance and the establishment of our UKIMEA Water Ambassador initiative which:
- Raises awareness of the importance of demand reduction;
  - Shares ideas and technologies that are being used within their office; and
  - Work with the facilities management team to use the most water efficient fittings.

Although the proportion of total waste diverted from landfill has remained broadly the same over the last few years, the proportion of composted waste has grown from 2% in 2015/16 to 6% in 2017/18. The increasing adoption of digital media, and the promotion of recycling and reuse in offices, has reduced paper consumption by 20%.

ENERGY USE

0.5%

increase per employee

4%

increase overall

CARBON EMISSIONS

6%

reduction in emissions per employee

1.5%

reduction overall

WATER USE

5%

reduction per employee

2.5%

reduction overall

WASTE MANAGEMENT

90%

office waste diverted from landfill

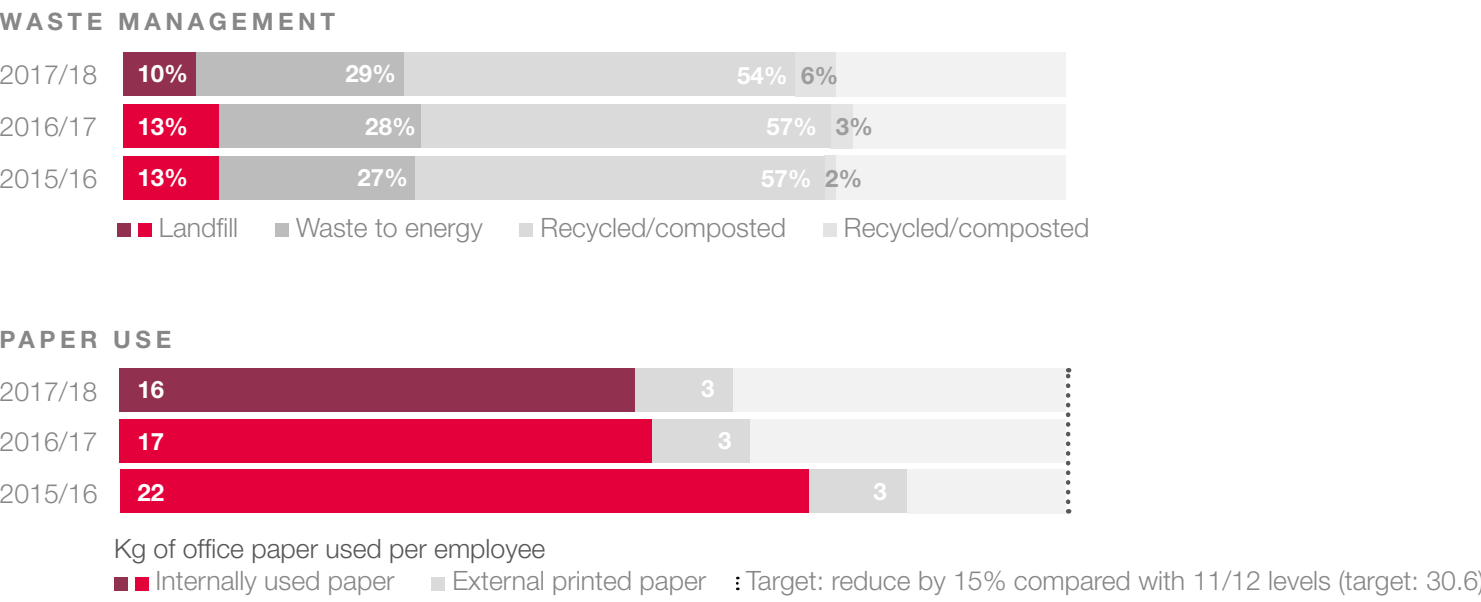
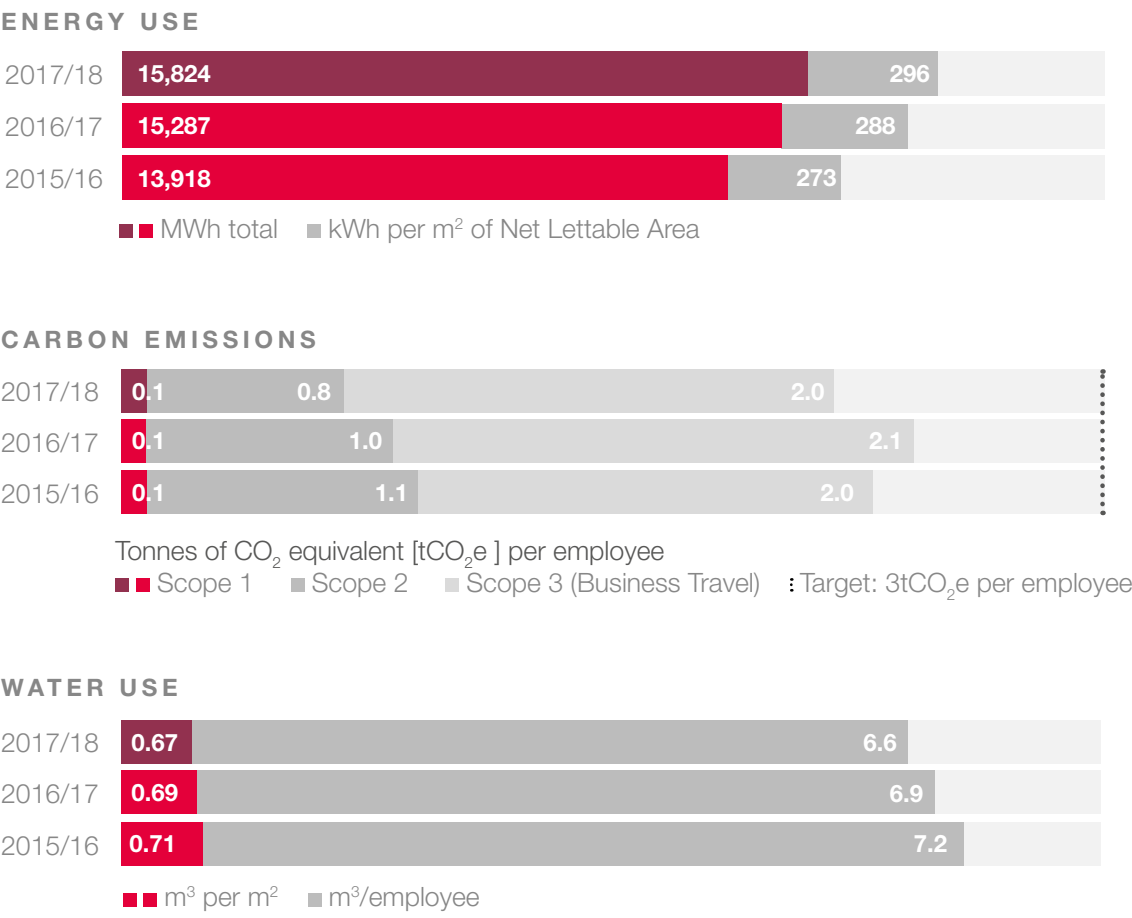
60%

office waste recycled, reused and composted

PAPER USE

25%

reduction per employee



This data covers performance from 1 April 2016 to 31 March 2017 in 22 buildings across the UK and Middle East. Previous data has been updated where new data has become available. Energy, water, waste, paper and carbon figures exclude our 5 African offices where data collection remains challenging.



OUR PEOPLE  
AND COMMUNITIES

Our mission is to shape a better world, and it is our people’s diverse range of skills and ideas that enables us to do this.

We’re driven to cultivate an inclusive working environment by our focused two-year UKMEA Diversity and Inclusion Strategy, which sits alongside our global Equality, Diversity and Inclusion, Human Rights and Harassment Codes of Practice.

Our success in this area has been recognised by the Association for Consultancy and Engineering (ACE), which named Arup as Diversity and Inclusion Champion of the Year in June 2018. The award is recognition of the way we put diversity and inclusion at the heart of our values, link it to our broader business strategy, and embrace the benefits of a truly diverse workforce.

Creating diversity is a key objective of our Sustainable Procurement Vision Statement and associated Procurement Plan, embedded throughout our procurement process and communicated to new suppliers

during tendering. Prioritising equality, diversity and inclusion has seen us revise our sourcing practices, supplier questionnaires, tender-scoring criteria and supplier contracts, to ensure to ensure they are considered and evaluated throughout procurement.

The health and safety of all our employees, including temporary and contract staff, and of other persons affected by our actions, is paramount. To ensure a safe and secure working environment, we provide health and safety training, specialist advice, information instruction, and supervision to personnel at all levels.

We work to ensure that everyone feels their contribution is valued and their successes are celebrated. Investing in our people is a key part of our approach to business, and our training and development programmes encourage knowledge sharing and intellectual growth to help us devise innovative solutions to some of the world’s most pressing challenges.

Our emphasis on training and technical excellence and our strong reward package enable us to attract and retain

world-leading engineers and designers. We offer them competitive salaries, profit share payments and a flexible benefits fund to spend on the benefits that suit them.

Our community engagement programme actively encourages and supports employees to participate in charitable activities that shape a better world.

DIVERSITY

1:2

female:male ratio - employees

1:2.4

female:male ratio - management

11.6%

managers completing diversity training

TRAINING

1.32 hrs

staff received specialist sustainability training

4.2 hrs

formal learning per employee

MANAGEMENT SYSTEMS

100%

offices certified ISO 14001 EMS

16%

of projects over £150,000  
setting specific sustainability objectives

COMMUNITY INVESTMENT

£525,644

invested in charities and community organisations

5,006

hours of pro-bono and volunteer work



IMAGES

In September 2017, we welcomed our largest ever intake of graduates and apprentices to our Early Careers programmes. This intake came from over 60 universities, 33 nationalities and are roughly 50% male and female representation - making it our most diverse intake to date.

Arup staff took part in annual Pride celebration by wearing the rainbow flag and visually demonstrating the values of equality, diversity and inclusion that make Arup a great place to work.

Employees raised over £1000 for Engineers Without Borders by taking part in our annual Jazzy Shirt and Blouse Day.





► **ENTREPRENEURIAL FUNDRAISING**

The Million Makers challenge sees teams pitching ideas to use £1,500 seed money to raise at least £10,000 for The Prince's Trust, which gives disadvantaged young people across the UK a chance to succeed. Our team of 12 in London had a successful year selling merchandise featuring Ove Arup's famous doodles and relaunching last year's limited edition Arup Monopoly. Sales of these items, plus money raised through comedy nights, Arup escape rooms and Christmas card sales, enabled them to raise £34,900 for the Trust.



▼ **PRODUCTS FOR UPCYCLING**

Goldfinger Factory is a social enterprise that gives local people from the Ladbroke Grove area in London the skills they need to create their own upcycling businesses. We're providing the organisation with technical design and materials advice to develop a range of products, which include storage containers and pen holders, made from waste plastic milk bottles and timber. The project will provide the factory's apprentices with knowledge and skills, give the organisation an additional income stream from product sales, and help us gain further understanding of the circular economy in action.



◀ **TELLING THE STORY OF WASH**

We supported charity FRANK Water's Refill initiative at festivals throughout the summer by engaging children and adults in global water, sanitation and hygiene (WASH) issues. As well as supporting FRANK Water and reducing plastic waste by selling refillable water bottles, we delivered a continuous series of workshops telling the "Story of WASH". This consisted of a mythical tale that highlighted global water and sanitation issues, and hands-on activities to educate children and adults on the importance of WASH and how FRANK Water is trying to combat the global water crisis.

▲ **SAFE PLACES FOR HOMELESS PEOPLE**

Hackney Winter Night Shelters provides homeless people with emergency sleeping accommodation in the East End of London over the winter months. Our fire risk assessments ensure the buildings that the charity uses, such as church halls, are safe. This year we visited 15 venues, issuing reports and drawings to the charity and the venue as well as advising them on any additional measures required.



# Appendix: GRI Content Index

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102: Organizational profile		
102-1	Name of the organization	Arup
102-2	Activities, brands, products, and services	<a href="https://www.arup.com/en/our-firm">https://www.arup.com/en/our-firm</a>
102-3	Location of headquarters	8 Fitzroy Street, London, W1T 4BQ, UK
102-4	Location of operations	<a href="https://www.arup.com/Offices">https://www.arup.com/Offices</a>
102-5	Ownership and legal form	<a href="https://www.arup.com/our-firm/structure">https://www.arup.com/our-firm/structure</a>
102-6	Markets served	<a href="https://www.arup.com/expertise">https://www.arup.com/expertise</a>
102-7	Scale of the organization	<a href="https://www.arup.com/perspectives/publications/corporate-reports/section/annual-report-2017?query=ANNUALREPORT">https://www.arup.com/perspectives/publications/corporate-reports/section/annual-report-2017?query=ANNUALREPORT</a>
102-8	Information on employees and other workers	<a href="https://www.arup.com/perspectives/publications/corporate-reports/section/annual-report-2017?query=ANNUALREPORT">https://www.arup.com/perspectives/publications/corporate-reports/section/annual-report-2017?query=ANNUALREPORT</a>
102-9	Supply chain	Not reported
102-10	Significant changes to the organization and its supply chain	Not reported
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102-12	External initiatives	<a href="https://www.arup.com/en/our-firm/Partnerships">https://www.arup.com/en/our-firm/Partnerships</a> Pg 3; Pg 17 ; Pg 26 Pg 29
102-13	Membership of associations	<a href="https://www.arup.com/en/our-firm/Partnerships">https://www.arup.com/en/our-firm/Partnerships</a>
102: Strategy		
102-14	Statement from senior decision-maker	Pg 3, Pg 4
102-15	Key impacts, risks and opportunities	Pg 4
102: Ethics and integrity		
102-16	Values, principles, standards, and norms of behavior	<a href="https://www.arup.com/en/our-firm/Our-values">https://www.arup.com/en/our-firm/Our-values</a> <a href="https://www.arup.com/en/our-firm/Ethics">https://www.arup.com/en/our-firm/Ethics</a>
102-17	Mechanisms for advice and concerns about ethics	<a href="https://www.arup.com/en/our-firm/Ethics">https://www.arup.com/en/our-firm/Ethics</a>
102: Governance		
102-18	Governance structure	<a href="https://www.arup.com/en/our-firm/Leadership">https://www.arup.com/en/our-firm/Leadership</a>
102-22	Composition of the highest governance body and its committees	<a href="https://www.arup.com/en/our-firm/Leadership">https://www.arup.com/en/our-firm/Leadership</a>
102-23	Chair of the highest governance body	<a href="https://www.arup.com/en/our-firm/Leadership">https://www.arup.com/en/our-firm/Leadership</a>
102-26	Role of highest governance body in setting purpose, values, and strategy	<a href="https://www.arup.com/en/our-firm/Leadership">https://www.arup.com/en/our-firm/Leadership</a>
102-27	Collective knowledge of highest governance body	Pg 28

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102-41	Collective bargaining agreements	Not reported
102-42	Identifying and selecting stakeholders	Not reported
102-43	Approach to stakeholder engagement	Not reported
102-44	Key topics and concerns raised	Not reported
102: Reporting practice		
102-45	Entities included in the consolidated financial statements	<a href="https://www.arup.com/perspectives/publications/corporate-reports/section/annual-report-2017?query=ANNUALREPORT">https://www.arup.com/perspectives/publications/corporate-reports/section/annual-report-2017?query=ANNUALREPORT</a>
102-46	Defining report content and topic Boundaries	Pg 4
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102-48	Restatement of information	Pg 27
102-49	Changes in reporting	None
102-50	Reporting period	April 2017 - March 2018
102-51	Date of most recent report	Jul-17
102-52	Reporting cycle	Annual
102-53	Contact point for questions regarding the report	Nigel Tonks, Region Sustainable Development Director UKMEA, Nigel.Tonks@arup.com
102-54	Claims of reporting in accordance with the GRI Standards	This report has been prepared in accordance with the GRI Standards: Core Option
102-55	GRI content index	GRI Content Page
102-56	External assurance	This report has not been externally assured

GRI 103: MANAGEMENT APPROACH		
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GRI 200: ECONOMIC		
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203: Indirect economic impcats		
203-2	Significant indirect economic impacts	Pgs 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 28, 29
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205: Anti-corruption		
		<a href="https://www.arup.com/en/our-firm/Ethics">https://www.arup.com/en/our-firm/Ethics</a>

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ARUP



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## Ethics Code of Practice

### 1 Introduction

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The ethical values of integrity, openness and fairness apply to all the activities of a company. It is important not only to have standards, but also to demonstrate to clients, and under possible media scrutiny, that such standards are being met; there is considerable reputational risk associated with ethical failures at a time when anti-corruption issues are high on the media and wider business agenda. The construction sector has been identified as one of the most vulnerable, and global companies that are exposed to diverse local business practices are particularly at risk.

The Board accepts responsibility to see that the values, principles and standards of business conduct underpinning how Arup operates are established and applied globally and, in accordance with the [Ethical Standards Policy](#), has nominated a member of the Arup Group Board to be responsible for ethical business practices.

This code of practice is intended to provide guidance on acceptable business practice to ensure that these values, principles and standards, are being met. Our behaviour will be judged against these standards.

### 2 Financial inducements

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- Arup will not, in any circumstances make or offer to make a payment or transfer anything of value for the purposes of improperly obtaining or retaining business or any other improper business advantage.
- Arup does not permit 'facilitation' payments (payments made to expedite or guarantee government services that we are legally entitled to e.g. connection of water, customs clearances) as these are prohibited in most countries. The only circumstances in which a facilitating payment should be authorised is where there is a real risk to your health and/or safety, or that of a third party, if such a payment is not made. In such event the payment should be reported so that actions can be taken as appropriate.

### 3 Using third parties (including agents) or working in a Joint Venture

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- Arup commits to undertaking appropriate due diligence on all agents and joint venture partners and, where appropriate, sub consultants that we work with.
- If we are required to use agents or representatives in particular countries they must have a clearly defined scope of service and agree to abide by the applicable laws and the terms of this code of practice as we may be liable for any financial inducements that our agent makes, or offers to make.
- Any agency or joint venture agreements that we enter into should require the partners to comply with all applicable anti-bribery laws and to comply with this code of practice.
- Arup should reserve the right under any such agency or joint venture agreements to terminate the arrangements if there is a breach of any applicable laws or of this code of practice.



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## 4 Gifts & Entertainment

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- You should exercise discretion in accepting or offering gifts or hospitality and, in determining whether it is appropriate, you should ensure you are aware of the circumstances and implications of the offer.
- Gifts and entertainment may be perceived as a financial inducement and should never be offered or accepted where the purpose is to gain an improper business advantage.
- Wherever possible, gifts from clients should be shared within the group that has been involved in the project.
- The following should be considered when determining if it is appropriate to accept or offer a gift or entertainment:
  - Any gifts or entertainment should be of a modest value, occur occasionally and be appropriate in all the circumstances. If you would feel embarrassed that colleagues or anyone outside of Arup knew about the gift, it is likely to be inappropriate.
  - The purpose of the hospitality must have a legitimate business purpose. It is not acceptable to accept hospitality if our business contact will not be present, and vice versa.
  - It is important to consider if the recipient is allowed to accept gifts, government officials and public bodies may be unable to do so.
  - As a general rule, we should only offer as gifts and entertainment what we would be comfortable to accept; and vice versa
  - There are some gifts and entertainment which cannot be accepted without prior approval from your Group Leader; these include, but are not limited to money; hospitality that lasts more than one day and that involves meals and/or travel being paid for.

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## 5 Competition

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- Competition, however fierce, should always be undertaken honestly and fairly.
- You must not use improper means to obtain information about our competitors.

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## 6 Confidentiality

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- Information that is not in the public domain or that may be regarded as confidential in relation to Arup's business or concerning any other organisation with which you, in the course of your work have had business dealings, must be kept confidential.
- You are reminded that there are laws in many countries that prohibit the use of confidential or unpublished information for insider trading on the stock market

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## 7 Conduct & Performance at Work

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- You are expected to apply due skill, care and diligence in the services that you provide for clients. You should, at all times, work to the best of your ability.
- It is your personal responsibility to acquaint yourself with the legal standards and restrictions that are applicable to the location in which you are working and to comply with these in all respects.



- Many of the professional bodies of which staff are members have ethical standards or Codes of Ethics that we individually, and corporately, must adhere to.
- If you are responsible for supervising others in Arup you should:
  - Promote ethical behaviour and compliance with the policy.
  - Monitor compliance with the policy and enforce it as is necessary.
  - Support employees who ask questions or raise concerns in good faith.

## 8 Client Activities

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- If you are reasonably concerned about the ethical aspects of a particular project, you will be allowed to decline involvement following appropriate consultation and agreement with your Group Leader.
- If you are reasonably concerned about ethical aspects of a client's activities, you will be allowed to withdraw from working with that client after appropriate consultation and agreement with your Group Leader and the approval of the Region Chair.

## 9 Conflicts of Interest

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- Arup's professional duty extends to not placing ourselves in a position where any conflict of interest is likely to arise. Where any potential conflict does arise, we must identify it and ensure it is appropriately addressed.
- Where we have more than one role on the same project for different clients:
  - Follow the procedures for identifying all job opportunities through job application forms.
  - Seek client agreement to the arrangements.
  - Implement effective information barriers between project teams so that teams are from separately located groups, led by separate project directors, and operating effectively as separate organisations. Further guidance on information barriers is available [here](#).
- You must not allow your private interests to influence your business judgment or decision making on behalf of Arup.
- You are not prohibited from owning shares in any of our client, partners, contractor's or competitor's businesses but it is essential that these business dealings do not raise a conflict of interest or give the appearance of doing so and you must comply with insider trading legislation at all times.
- Jobs/affiliations of close relatives may give rise to the appearance of a conflict of interest and this should be taken into account.
- You may be asked to serve on the board of directors or as trustees etc. of another organization and such roles can provide opportunities for personal development as well as building experience and relationships in new areas. Approval must be sought before such a post may be accepted in the following circumstances:
  - Seek client agreement to the arrangements.
  - Where the organization is commercial (as this is likely to increase the chance of a conflict arising); or
  - Where there are, or may be perceived to be, concerns in respect of time and commitment, financial exposure or reputation.

Approval should be obtained from the relevant Region Chair or, in the case of a Region Chair or Group Board member, by the Group Chair.



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## 10 Political Contributions

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- Arup funds or facilities may not be used to make political contributions to any organisation or candidate for public office. You are not restricted from contributing financially, from your own funds, to political campaigns or from participating, in your own time, in political campaigns.

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## 11 Sanctions

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- Arup will not carry out activities which would breach sanctions laws and regulations in the jurisdictions in which the Group operates.
- Certain sanctions rules apply to individuals in their personal capacity, notably US sanctions rules for US Persons and the equivalent for EU Persons. You are expected to be aware of any personal sanction restrictions that apply to you.
- Approval must be sought before entering into discussions with potentially sanctioned parties or pursuing opportunities in sanctioned countries from the Group COO.

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## 12 Asking Questions & Raising Concerns

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- Arup encourages all staff to discuss any queries or concerns that relate to ethical business practices.
- If you have a concern or suspect that a breach of this code of practice has occurred or may occur, you have a duty to report these concerns.
- You may report suspected breaches of this code of practice anonymously, although you are encouraged to identify yourself so that a full investigation is possible. Investigation may not be possible or effective where reports are anonymous. Arup will conduct any investigations sensitively and will take all reasonable steps to keep your identity confidential but in some cases disclosure will be unavoidable.
- All potential breaches of this code of practice that are reported in good faith will be investigated responsibly.
- Arup will not tolerate any form of retaliation against individuals who report, in good faith, breaches or potential breaches of this code of practice.
- If you would like to ask a question or to report a suspected breach, you should:
  - Direct all queries are directed through your Group Leader in the first instance.
  - Where this is not possible or appropriate, employees may choose to contact the nominated member of the Arup Group Board.

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## 13 Disciplinary Procedure for breach

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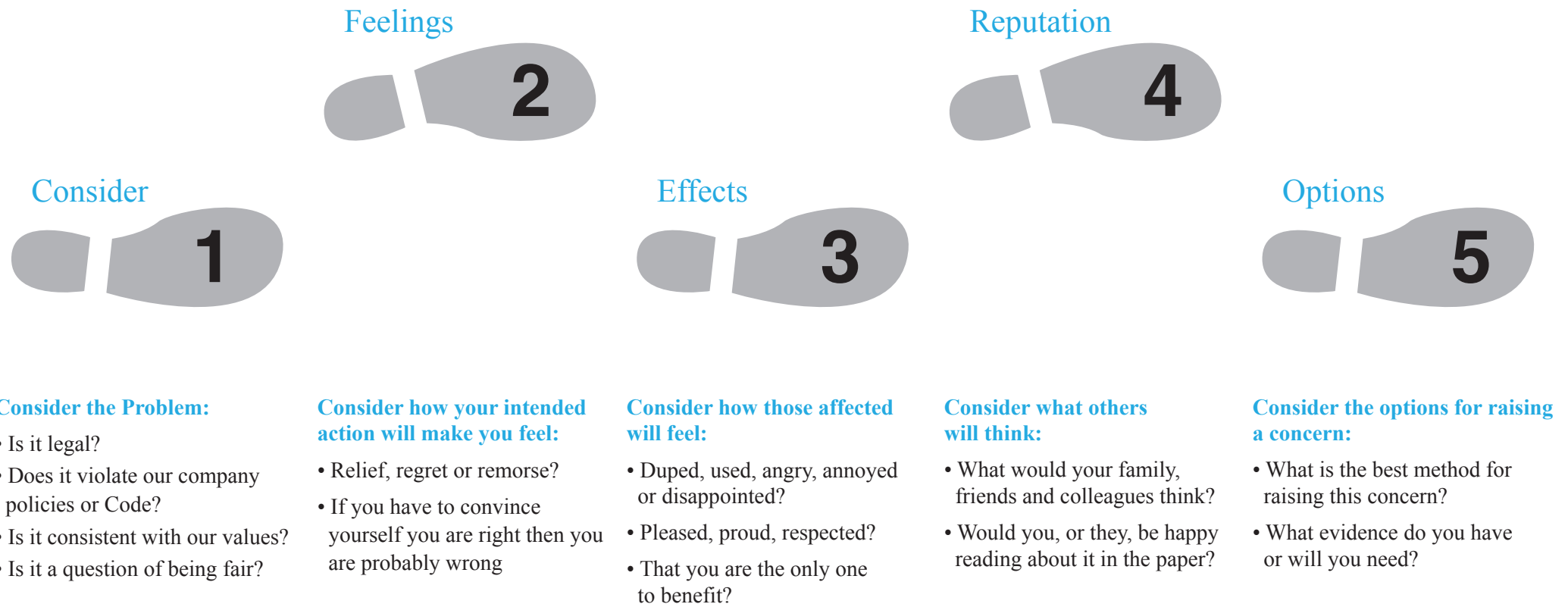
Failure to comply with the spirit or letter of this code of practice may result in significant reputational damage to Arup. Further, breaches of the law, of any country, is a serious matter which may subject Arup and/or individual employees to civil and criminal penalties.

In addition to the above, where individuals are in breach of the terms of their contract of employment they may be subject to disciplinary action, up to and including termination.



# Making Ethical Decisions

Making ethical decisions can be difficult and to help, we recommend you apply a 5-step approach to the ethical decision making process.



This simple 5 step approach can be applied to any dilemma and when used alongside the code of practice you'll have the confidence to act ethically.



# Disciplinary UK Procedures

## Introduction

It is necessary for the proper operation of Arup's business and the health and safety of the firm's employees that we operate a disciplinary procedure. The following procedure will be applied fairly in all instances where disciplinary action is regarded as necessary, save to the extent that a minor reprimand is given for any minor act of misconduct committed by an employee.

The firm reserves the right to implement the procedure at any stage as set out below taking into account the alleged misconduct of an employee. Employees will not ordinarily be dismissed for a first disciplinary offence.

Where time limits are referred to in the course of this procedure they may be varied by agreement between the employee and Arup.

Matters that the firm views as amounting to disciplinary offences include (but are not limited to):

- persistent bad timekeeping;
- unauthorised absence;
- minor damage to the firm's property;
- failure to observe the firm's procedures;
- abusive behaviour;
- unreasonable refusal to follow an instruction issued by a manager or supervisor;
- poor attendance;
- smoking or use of an e-cigarette in non-designated areas of the firm's premises; and
- bribery offences under the Bribery Act 2010.

## Gross misconduct

Gross misconduct is misconduct of such a serious and fundamental nature that it breaches the contractual relationship between the employee and the firm. In the event that an employee commits an act of gross misconduct, the firm will be entitled to terminate summarily the employee's contract of employment without notice or pay in lieu of notice.

Matters that Arup views as amounting to gross misconduct include (but are not limited to):

- stealing from the firm, members of staff or the public;
- other offences of dishonesty;



- falsification of a qualification that is a stated requirement of the employee's employment or results in financial gain to the employee;
- falsification of records, reports, accounts, expense claims or self-certification forms, whether or not for personal gain;
- sexual misconduct at work;
- fighting with or physical assault on members of staff or the public;
- deliberate damage to or misuse of the firm's property;
- serious damage to the firm's property;
- drunkenness or being under the influence of illegal drugs while at work;
- possession, custody or control of illegal drugs on the firm's premises;
- serious breach of the firm's rules, including, but not restricted to, health and safety rules and rules on computer use;
- gross negligence;
- conviction of a criminal offence that is relevant to the employee's employment;
- conduct that brings Arup's name into disrepute; and
- discrimination or harassment of a fellow worker on the grounds of sex, sexual orientation, race, disability, age or religion or belief.

Other acts of misconduct may come within the general definition of gross misconduct.

## **Investigation**

An employee's **appointed/immediate** manager will promptly and thoroughly investigate any matter that is reasonably suspected or believed to contravene any of the firm's policies or rules or may otherwise be a disciplinary matter. The employee will be informed as soon as possible as to the fact of an investigation and when it has been concluded.

There may be instances where suspension with pay is necessary while investigations are carried out. Arup has the right to suspend with pay where there are reasonable grounds for concern that evidence may be tampered with, destroyed or witnesses pressurised before the disciplinary hearing, or if there is a potential risk to the business or other employees or third parties in allowing the employee to remain at work.

Depending on the circumstances of the case, the employee may be invited to attend an investigatory interview. If such an interview is held prior to a disciplinary hearing, the employee will be informed at the outset that the interview is an investigatory interview. There is no right for employees to be accompanied at a formal investigatory interview. Arup reserves the right to dispense with an investigatory interview and to proceed directly to a formal disciplinary hearing.

## **Procedure**

Where, upon completion of an investigation, there are reasonable grounds to believe that there



is a case to answer, the employee will be invited to attend a disciplinary hearing before the employee's manager or manager of a similar level to the employee's manager.

In the event of a disciplinary hearing taking place the firm will:

- a. give the employee a minimum of two working days' advance notice of the hearing;
- b. tell the employee the purpose of the hearing and that it will be held under Arup's disciplinary procedure;
- c. explain that the employee may be accompanied at the hearing by a fellow worker or Airtime representative;
- d. give the employee written details of the nature of their alleged misconduct; and
- e. provide to the employee all relevant information (which should include statements taken from any fellow employees or other persons that the firm intends to rely upon against the employee) not less than two working days in advance of the hearing

Where the employee is unable to attend a disciplinary hearing and provides a good reason for failing to attend, the hearing will be adjourned to another day. Arup will comply with (a) above in respect of giving notice of the rearranged hearing. Unless there are special circumstances mitigating against it, if the employee is unable to attend the rearranged hearing, the rearranged hearing will take place in the employee's absence. The employee's fellow worker or Airtime representative may attend in such circumstances and will be allowed the opportunity to present the employee's case. The employee will also be allowed to make written submissions in such a situation.

## **The right to be accompanied**

Employees may be accompanied by a fellow worker or Airtime representative at any disciplinary hearing or subsequent appeal.

The choice of companion is a matter for the employee. Please note that individual workers are not obliged to agree to accompany an employee. Companions will be given appropriate paid time off to allow them to accompany colleagues at a disciplinary hearing or appeal hearing.

## **Role of the companion**

At any disciplinary hearing or appeal hearing, the employee's chosen companion will be allowed to address the meeting, respond on the employee's behalf to any view expressed in the hearing, and sum up the case on their behalf. However, both the hearing and appeal hearing are essentially meetings between the Arup and the employee, so any questions put directly to the employee should be dealt with by the employee and not their companion.

Where the chosen companion is unavailable on the day scheduled for the meeting or appeal, the meeting will be rescheduled, provided that the employee can propose an alternative time within five working days of the scheduled date.



## **Accessibility**

If any aspect of the disciplinary procedure causes an employee difficulty on account of a disability they may have, or if they need assistance because English is not their first language, they should raise this issue with their HR Business Partner, who will make appropriate arrangements.

## **Recording the hearing**

In order to encourage open and transparent discussion, Arup does not permit the electronic recording of disciplinary hearings, unless it has been agreed as a reasonable adjustment in relation to disability, in advance of the hearing. Making recordings in breach of this procedure will be grounds for disciplinary action.

Notes will be taken during the hearing, a copy of which may be provided to the employee upon request.

## **The disciplinary hearing**

A disciplinary hearing will normally be conducted by the employee's manager together with a member of the HR Team (the panel). Any member of management responsible for the investigation of the disciplinary offence(s) shall not be a member of the panel, although such managers may present any supporting facts and material to the disciplinary hearing. The employee will be entitled to be given a full explanation of the case against them and be informed of the content of any statements provided by witnesses. The employee will be able to call their own witnesses. They will be permitted to set out their case and answer any allegations. The employee will be given a reasonable opportunity to ask questions, present evidence and call relevant witnesses. They will also be given the opportunity to raise points about any information provided by witnesses. Where the firm intends to call relevant witnesses it will give the employee advance notice of this. The employee must also give advance notice if they intend to call relevant witnesses.

The firm may adjourn the disciplinary proceedings if it appears necessary or desirable to do so (including for the purpose of gathering further information). The employee will be informed of the period of any adjournment. If further information is gathered, the employee will be allowed a reasonable period of time, together with their fellow worker or Airtime representative, to consider the new information prior to the reconvening of the disciplinary proceedings.

As soon as possible after the conclusion of the disciplinary proceedings, the hearing manager will convey their decision to the employee and will also inform the employee what disciplinary action, if any, is to be taken. The decision will be confirmed in writing. The employee will be notified of their right of appeal under this procedure.

## **Disciplinary action**

Where, following a disciplinary hearing, the firm establishes that the employee has committed a disciplinary offence, the following disciplinary action may be taken:



- a. Where a minor offence or offences have been committed, a recorded oral warning may be given. The warning will ordinarily state that any further misconduct will render the employee liable to further, more severe disciplinary action. The employee should be informed of the period that the warning will remain "live". During this period, the firm may rely on such a warning in the event of further misconduct on the part of the employee.
- b. Where either a more serious disciplinary offence has been committed or further minor offences have been committed by an employee following a recorded oral warning that remains "live", the employee will receive a first written warning. The warning will:
  - i. set out the nature of the offence committed;
  - ii. inform the employee that further misconduct is liable to result in further disciplinary action under this procedure;
  - iii. specify the period for which the warning will remain "live", after such period the warning will automatically lapse; and
  - iv. state that the employee may appeal against the warning.
- c. Where a serious disciplinary offence amounting to gross misconduct has been committed, thereby justifying summary dismissal, but the firm decides, after taking into account all appropriate circumstances, that a lesser penalty is appropriate, or, where an employee commits further disciplinary offences after a first written warning has been issued and remains "live", a final (or combined first and final) written warning may be given. Such a warning will:
  - i. set out the nature of the offence committed;
  - ii. inform the employee that further misconduct is likely to result in their dismissal; and
  - iii. state that the employee may appeal against the warning.
- d. Where the employee has committed further acts of misconduct (these being acts of misconduct other than gross misconduct) following a final written warning given under c. above, the employee may be dismissed with notice or with pay in lieu of notice.
- e. Where the firm establishes that an employee has committed an act of gross misconduct, the employee may be summarily dismissed.
- f. Where a final written warning is given to an employee under c. above, Arup may also impose on the employee:
  - i. disciplinary suspension;
  - ii. demotion;
  - iii. in line with any provision in the contract of employment, transfer to a job of a lower status.

The above sanctions may be imposed in conjunction with other forms of disciplinary action (e.g. salary freeze), or as an alternative to dismissal.



## Appeal

An employee may appeal against any disciplinary sanction imposed against them, with the exception of an informal oral warning.

A request for an appeal should be sent in writing to a Senior HRBP or the Director of HR and set out the grounds on which the employee believes that the decision was flawed or unfair. The request should be sent within five days of the employee receiving written confirmation of the sanction imposed on them by the firm.

When lodging an appeal, the employee should state:

- The grounds of appeal; and
- Whether they are appealing against the finding that they have committed the alleged act or acts of misconduct, or against the level of disciplinary sanction imposed.

The appeal will be heard by a senior manager (e.g. Group Leader) who has not been involved in the decision to impose the disciplinary sanction on the employee. This senior manager should be someone not in the Group of the group of the employee who has requested the appeal. The senior manager is obliged to consider any representations made by the employee, the employee's fellow employee or Airtime representative and those of the manager who conducted the investigation and the manager who conducted the disciplinary hearing and imposed the disciplinary sanction. The senior manager hearing the appeal must decide on the basis of both sets of representations, together with any subsequent facts that may have come to light, whether or not to uphold the disciplinary sanction. In the event that the senior manager finds for the employee, the senior manager shall allow the appeal and shall remove all records of the disciplinary sanction from the employee's record. In the event that the senior manager does not accept the representations made by or on behalf of the employee, the senior manager must uphold the disciplinary sanction.

Appeal hearings will normally take place within 14 days of receipt of the employee's written notice of appeal.

Upon completion of the appeal, the senior manager conducting the hearing will convey their decision to the employee. The decision will be confirmed in writing without unreasonable delay. The firm's decision at the appeal is final.

Where an appeal lies against a dismissal by the panel, the panel's decision to dismiss will have had immediate effect and, therefore, if the dismissal is by notice, the period of notice will already have commenced on the date that the decision was given by the panel. If the panel's decision was to dismiss the employee summarily without notice, the firm will be under no obligation to reinstate or pay the employee for any period between the date of the original dismissal and the appeal decision and the original date of termination will stand. In the event that the decision to dismiss is overturned, the employee will be reinstated with immediate effect and they will be paid for any period between the date of the original dismissal and the successful appeal decision. Their continuous service will not be affected.

## Special Cases

If an employee is charged with, or convicted of a criminal offence, this is not normally in



itself reason for disciplinary action. Consideration needs to be given to what effect the charge or conviction has on the employee's suitability to do the job and their relationship with the firm, it's clients and their work colleagues.

## **Roles and responsibilities**

**The HR Team** is available to provide advice and guidance in respect of employment law, procedure and process to all members involved in the use of this policy and procedure.

**Managers** are responsible for notifying the HR Team when a disciplinary investigation/hearing is instigated and for keeping the HR Team informed, and involved as necessary, throughout the process.

All information in relating to a formal disciplinary procedure will be held confidentiality on an employee-personal file.

## **Review of this procedure**

This procedure will be monitored periodically by Arup and will be updated in accordance with changes in law. This procedure is not contractual and can be amended by the firm at any time.

## **Legislation relating to this procedure**

The following is only a guide to the legislation that impacts on this procedure and is not a comprehensive list:

Employment Rights Act 1996  
Employment Relations Act 1999  
Employment Act 2008

## **Policy owner**

Diane Thornhill, HR Director for UKMEA



# Privacy Policy



## Objectives

The firm will protect the privacy of individuals when handling any personal information and ensure the firm is compliant, as far as possible, with relevant data protection and privacy laws by adhering to the following principles:

- Be transparent about its collection, use and disclosure of personal information.
- Collect and use personal information fairly and lawfully.
- Only collect personal information that it requires and only keep it for as long as is necessary.
- Keep personal information accurate and up to date.
- Respect the privacy rights of individuals granted by privacy laws.
- Keep personal information secure.

## Outcome

In meeting these objectives the firm will:

- Commit to keep abreast of all applicable data protection/privacy laws of the jurisdictions in which we operate.
- Take steps to provide appropriate training and support to ensure that all personnel are aware of our obligations under this Policy and follow our data protection procedures when handling the personal information of others.
- Implement relevant security procedures and issue guidance to staff explaining their data protection and security obligations.
- Ensure that when sharing personal information with third parties we do so only where necessary and seek assurances that the third party has adequate security procedures in place to protect such information.
- Implement clear processes for individuals to raise concerns about how the firm processes their personal information and for resolving any such concerns.
- Ensure our privacy notices are clear, accessible and give sufficient information about how we use and share personal information and where personal information can be updated or corrected.
- Delete/destroy personal information no longer needed for its original business purpose in accordance with our retention and destruction policies and procedures, unless we have a legal obligation to retain personal information for a certain period.
- Only transfer personal information outside jurisdiction to other Group companies in accordance with relevant legal requirements.

Date  
May 2015

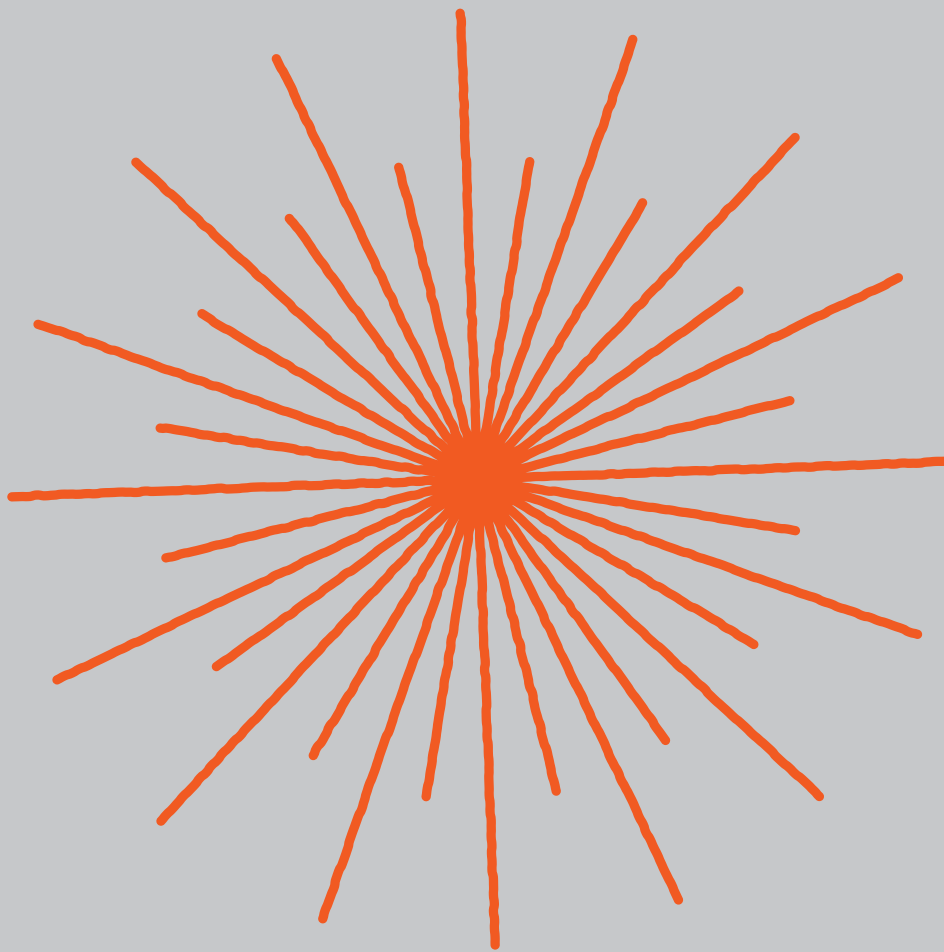
Prepared by  
Clare Bristow

Approved by  
Group Board



# Community Engagement – Global Plan

3 Years 2018 – 2021



01/04/18

ARUP



“Humanitarianism also implies a social conscience, a wish to do socially useful work, and to join hands with others fighting for the same values.”

Sir Ove Arup

## FOREWORD

In the age of distrusting the expert and the haves and have not's of globalism, Ove Arup's Key Speech commitments to humanitarianism and social usefulness are more relevant than ever.

Our Community Engagement (CE) Programme is an expression of who we are, more than what we do. We are driven by the beneficial impact we can have on the lives of the individuals and communities in which we work.

Arup is in a position to create positive social impact through the nexus between our people-centred values and our ability to solve complex technical problems in the built environment.

We now have an opportunity to build on the strengths of the programme by measuring and evaluating our outcomes and scaling our impact.

We plan to do this by collaborating with partners, nurturing a culture of participation across the firm and by working with industry to influence major issues affecting vulnerable, marginalised and disadvantaged people.



Jerome Frost, Director, Arup



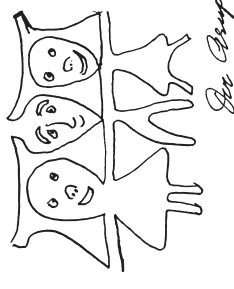
## Our vision

Unprecedented change engulfs our planet. Poverty, resource scarcity, climate change, population growth, political uncertainty and inequality are just a few issues facing us today.

As Ove Arup said in his Key Speech, 'humanitarianism also implies a social conscience, a wish to do socially useful work, and to join hands with others fighting for the same values'.

With the specialised skills and resources we have at Arup, we believe we can help shape a better world. We want to see a future that is inclusive, sustainable and resilient.

We aim to work in partnership with communities to improve the lives of vulnerable, marginalised and disadvantaged members of society by providing access to quality infrastructure, opportunity for all and quality of life.



# 74%

of millennials believe that multinational companies are not fully realising their potential to alleviate society's biggest challenges.

Deloitte Millennial Survey 2017



© iStock



## SUSTAINABLE DEVELOPMENT GOALS

# A guiding framework

Arup has made a commitment to support the United Nations' Sustainable Development Goals (UN SDGs) through the work of our firm. The UN SDGs will be used as a framework against which to set project aspirations and targets for the most important aspects of social, environmental and economic sustainability.

The CE programme will work closely with the broader business to apply the UN SDG framework on our projects. We will use the goals as a way to focus our efforts and create greater collaboration between regions.



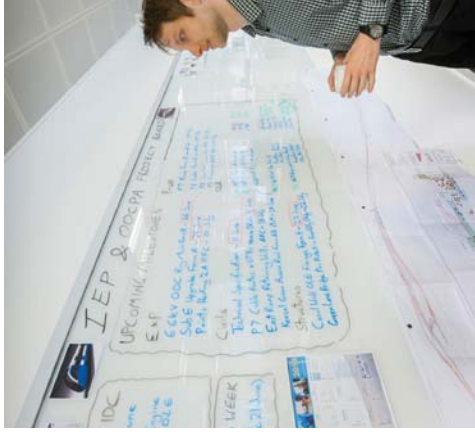
We mapped our programmes against the UN SDGs to identify focus areas where we believe we can have the greatest impact. The following four goals were identified and will be the focus of our impact measurement.



It is important to note that CE projects and activities will not be limited to the above UN SDGs and there are interrelationships between all UN SDGs. Three other UN SDGs rated highly in the mapping process including No Poverty (1), Good Health and Well-being (3) and Reduced Inequalities (10). We will continue to monitor and evaluate the four target areas of focus and update as required.



## Our strategic objectives



Over the next

# 3 years

we are aiming to:

### MAXIMISE OUR IMPACT

We will have a greater strategic focus built around thematic areas linked to the UN SDGs. We will prioritise projects that can be taken to scale and / or be replicated to maximise our impact. We will encourage greater collaboration between regions through strategic partnerships and projects. We will increase our investment in disaster response and recovery work.

### MEASURE, EVALUATE AND REPORT

We will develop and implement an impact measurement framework to better understand the outcomes we are seeking and how well we are achieving them. We will report on outcomes and overall impact drawing on data from the field. We will share our learnings and celebrate our successes.

### INCREASE OUR VISIBILITY AND PARTICIPATION

We will work with Global and Regional Communications teams to grow the profile of the CE Programme internally and externally to enhance participation and brand awareness. We will inspire our leadership teams to actively support the programme.



## Our strategic objectives

In the next

# 12 months

we are focussing on:

- Aligning the various CE programmes with the UN SDGs through the process of identifying thematic areas of focus consistent with our core capabilities in region
- Increasing the number of large, scalable projects with measurable outcomes
- Strengthening the Disaster Response and Recovery programme by building longer term partnerships with NGOs and training more staff to be deployed resulting in a greater impact on communities affected by disasters
- Strengthening and streamlining our systems and processes including use of the Arup Management System, Invest in Arup and reporting to stakeholders
- Strengthening CE global collaboration to improve our knowledge sharing and leverage partnerships
- Refreshing our communications to raise awareness and increase participation across the firm



© Istock



70% of businesses plan to embed the UN SDGs within 5 years

PwC Global, 2015



## HOW WE PLAN TO SHAPE A BETTER WORLD

# Our approach

We aim to deliver our CE Programme in the following ways:

### WORKING WITH PARTNERS

We will strengthen our partnerships with non-Government Organisations (NGOs), charities and development experts to shape, fund and deliver a programme of activities to support communities. We recognise that we are often not the experts in working with vulnerable, marginalised and disadvantaged communities. Therefore, we will have more impact by working with the experts who have well established knowledge, relationships and tried and tested means of project and programme delivery in the community engagement field.



© Yimngga Aboriginal Corporation Centre of Appropriate Technology Ltd.

### ENGAGING STAFF

Our CE activities will be rooted in staff engagement. People at Arup possess an incredible range of skills, knowledge, experience and interests. The projects we work on every day bring us close to many issues that confront the world's disadvantaged populations, from urban poverty to infrastructure issues, educational needs to disaster response and recovery. The CE Programme provides a mechanism to support and channel staff knowledge and motivation into socially useful activities and maximise participation.

### ADVOCACY

We believe Arup should have an influential voice on some of the major issues affecting vulnerable, marginalised and disadvantaged groups – where they overlap with our areas of expertise in the built environment. With support from our Communication teams and Arup University we will work with other companies, clients and collaborators to give voice to significant issues and target joint action to address them.





## IMPLEMENTING OUR STRATEGIC PLAN

The Global CE Steering Group will provide oversight, direction and strategic partnering relationships as this strategic plan is implemented across programmes. This Plan will be implemented by the Global CE Committee with support from the Global CE Programme Manager. This comprises of the various Fund Managers who will be responsible for the implementation of plans for the following funds:

**Local Engagement** – providing support to organisations and communities that are local to our offices across the world and for whom our skills are relevant.

**Development** – providing technical assistance to community based organisations; enhancing their capacity to address issues and improve people's lives in developing country contexts.

**Disaster Response and Recovery** – enabling our people to respond to humanitarian needs by partnering with aid agencies and other partners on the ground by deploying staff, supplying technical assistance from afar and/or the provision of financial support.

**Global Challenge** – collaborating with NGO partners to address selected UN SDGs and deliver impact at scale.

**Education** – providing funding to partner organisations including The Ove Arup Foundation and the Africa Education Trust to advance education outcomes for individuals in the built environment.

**Carbon Reduction** – engaging in projects and initiatives to reduce our carbon footprint in line with our carbon reduction strategy.

**Arup International Development will provide technical assistance and mentoring as required across the delivery of each CE programme.**

## FINANCIAL RESOURCES

Every year we will set aside between 3-5% of our profits to invest in the Global CE Programme, using the UN SDGs to focus and prioritise our efforts. We will measure, evaluate and report on the impact we are having annually and continually strive to increase it.





## END NOTES

This document is referred to as the '*Global Community Engagement Plan*' and has been developed as an enabler of the 'Global Arup Strategy'.

We define community engagement as 'working collaboratively with our partners to deliver high quality social outcomes for communities in need'.

The United Nations' Global Compact is the world's largest corporate sustainability initiative calling companies to align strategies and operations with universal principles that advance societal goals. <https://www.unglobalcompact.org/>

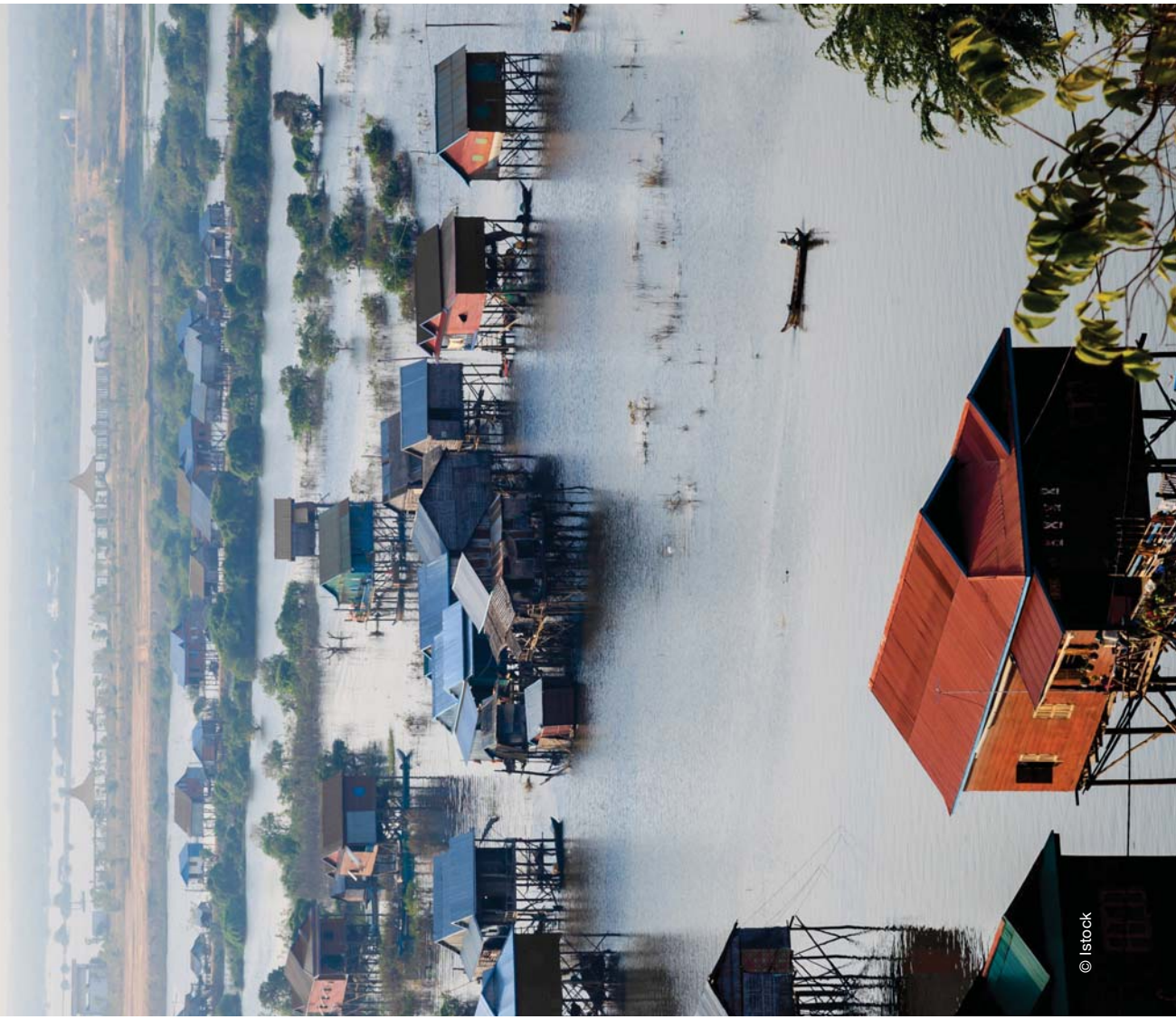
Social Impact is defined as 'the net effect of an activity on a community and the well-being of individuals and families.' Centre for Social Impact [www.csi.edu.au/](http://www.csi.edu.au/)

The UN states that: 'sustainable development calls for concerted efforts towards building an inclusive, sustainable and resilient future for people and planet'. <http://www.un.org/sustainabledevelopment/%20development-agenda/>

Evaluation is defined as 'the systematic process of collecting and analysing data to determine if and to what extent program goals have been achieved.' Pell Institute, toolkit. [pellinstitute.org/evaluation-101/](http://pellinstitute.org/evaluation-101/)

A Logic Model presents a plausible model of how the programme will work under certain conditions to solve identified problems (McLaughlin, J. & Jordan, G., (1999), 'Logic Models: A Tool for Telling Your Program's Performance Story', Evaluation and Program Planning, v.22, no.1)

*Arup has worked with stilted villages in the Tonle Sap Lake in Cambodia to support the development of bio digesters for waste management and energy supply.*





We shape a  
better world





ARUP

COMMUNITY ENGAGEMENT PROGRAMME

# 2017-18 Review



“Humanitarianism also implies a social conscience,  
a wish to do socially useful work, and to join hands  
with others fighting for the same values.”

Ove Arup, The Key Speech





Thank you  
• • •

Projects 2017-18

Global Challenge

The next three years

Get involved

## COMMUNITY ENGAGEMENT PROGRAMME

# Thank you

It is thanks to the direction set by Ove Arup and our founding partners, and the way they formed our firm, that we are able to stay focused on the way that we shape a better world. Because of our independent structure, we can decide how and why we do things. And we choose to invest a significant portion of our time and resources in helping marginalised, vulnerable and disadvantaged people across the world. This collective commitment has evolved into our Community Engagement programme.

As Chair of the Global Community Engagement Steering Group, I thank Arup staff and leadership for their ongoing contribution and support. From ideas to partnerships, volunteering to fundraising, our people are our Community Engagement.

It's thanks to our clients that we get to identify and solve problems day in, day out. We want our clients to share the success of the Community Engagement work that they help to make happen.

Our approach is rooted in trusted partnerships and we thank the range of small to large organisations, companies and political

institutions that have joined their expertise with our own to give our Community Engagement the greatest possible impact.

Lastly, we must thank the people that have welcomed us into their communities to use our specialism and resources to help. We consider ourselves and our people as part of the communities in which we work and we value greatly the long-term relationships that are often formed through these projects.

We want to constantly improve our Community Engagement work to make it as efficient and engaging as possible. This review celebrates the success of our shared endeavour but also shows how we want to do better. We are implementing a three-year plan, which at its core will ensure that the investment of resources, trust and support in our Community Engagement continues to have the impact it deserves.



Thank you

Jerome Frost,  
Chair of the Community Engagement  
Steering Group

£3.08m  
total 2017-18  
contribution

40,000  
estimated  
beneficiaries

2,000+  
staff took part

10,300+  
unpaid hours  
given

23  
strategic  
partnerships

170+ projects  
200 activities  
38 countries

44%  
of projects  
can scale





Thank you  
○○●○

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COMMUNITY ENGAGEMENT PROGRAMME

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Thank you

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## COMMUNITY ENGAGEMENT PROGRAMME

# Projects 2017-18

Working in partnership to improve the lives of vulnerable, marginalised and disadvantaged people.

Select *read more* for full stories.



Our funds





Thank you

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HELPING HACKNEY WINTER



## HELPING HACKNEY WINTER NIGHT SHELTER REBUILD LIVES

UK

Hackney Winter Night Shelter (HWNS) provides more than 100 homeless people with emergency winter sleeping accommodation in venues across the London Borough, as well as supporting them to get their lives back on track. Six of our fire engineers assessed the 15 venues used this year, which included buildings such as church halls, to ensure they were safe.

### More than a hot meal and a warm bed

The scheme provided safe sleeping accommodation to a total of 116 guests throughout the coldest months of the year. They get much more than just a hot meal and a warm bed, HWNS helps people rebuild their lives.

Guests receive travelcards so they can attend important appointments. HWNS also works with local agencies to find them more stable accommodation and provides move-on packs to help them settle into new homes. This year, 73 guests were helped to move on.

The charity first asked us to do fire risk assessments in 2014, and turned to us again this year when fresh assessments were needed. Staff from our London, Leeds, Sheffield, Campus and Edinburgh offices contributed 326 hours of expertise, with 136 of those unpaid and the rest funded through our Community Engagement programme.

### Valuable and rewarding experience

Our team included senior staff as well as new graduates, for whom the experience proved particularly valuable.

*"My involvement in this scheme was wholly rewarding, both in terms of our contribution to the local community and my personal development. This project deepened my appreciation of fire safety and its implementation given the unique constraints of certain buildings."*

**George Wood, Fire Engineer, Leeds**

*"Undertaking site visits with our more experienced engineers was a really useful experience for me. I am now*



*better prepared for future fire risk assessments, which I will need to undertake as part of my role."*

**Chris Gray, Fire Engineer, Campus**

The engineers created reports and drawings for the charity and the venue as well as advising them on measures to further improve safety, such as fitting more smoke detectors and ensuring torches were available

for evacuation at night. This ensured that all the venues hosting vulnerable guests were as safe as possible.

- Safeguarding 100 homeless people
- 326 hours of Arup expertise

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ground to provide staff and resources, deployed and remotely... [Read more >](#)

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to cut carbon emissions and improve health in urban Kenya... [Read more >](#)





Thank you

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HELPING HACKNEY WINTER



## BRINGING RENEWABLE ENERGY TO REFUGEES IN ETHIOPIA

Ethiopia / USA

Electrical engineers from our San Francisco office are working with long-term partner Engineers Without Borders USA (EWB-USA) to help the United Nations High Commissioner for Refugees (UNHCR) bring renewable energy to 220,000 refugees in Ethiopia.

### Solar micro-grids

The refugees living in camps in the Dollo Ado region fled famine, drought, civil war and violence in Somalia. By installing 52 solar micro-grids, the project will bring clean, reliable and affordable electricity to the camps and create jobs for the refugees.

We've partnered with EWB-USA since 2010 on a variety of projects, and have been working at Dollo Ado since January 2018. Our team has helped with feasibility studies and design work, training refugees in electrical fundamentals, safety and installation methods, and overseeing the construction of micro-grids.

Stephanie Gulliver completed a 3-month volunteer assignment with UNHCR in Ethiopia, while other team members – Russell Carr, Eric Mannarino and Ruby Heard – provided remote technical support.

*"Arup's employees bring the organisation's vast technical resources and high degree of engineering competence to bear on the important and urgent problems presented by this project. Their support enables EWB-USA to provide a high-quality technical service to our clients and partners."*  
Elizabeth Joyce, EWB-USA Project Manager

### Self-reliant cooperatives

Already, 60 refugees have been trained in electrical safety and installation, providing them with a trade and giving the community expertise they can call on. Nine micro-grid systems have been installed at health centres in the refugee camps. And five energy cooperatives have been formed.



UNHCR's goal is for the five cooperatives to become self-reliant, making a profit by operating the micro-grids and providing technical maintenance services within the refugee camps. To help achieve this, we will continue to support the project remotely throughout 2018 – providing design assistance and helping to document the project.

More information about this project and Engineers Without Borders USA can be found at [www.ewb-usa.org](http://www.ewb-usa.org).

- 52 solar microgrids for 220,000 refugees

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Thank you

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Global Challenge

The next three years

Get involved

HELPING HACKNEY WINTER



## COMBINING EDUCATION AND CLEAN WATER IN SENEGAL

Senegal / Germany / UK

The completion this year of a unique new school in Keur Bakar, Senegal, marks the culmination of a project on which specialists from four Arup offices have been working since 2015.

The training school, which will provide vocational education for around 90 students, uses local insulation materials and has been designed to harvest and store rainwater for drinking, cooking, washing and irrigation. We collaborated with Italian architectural studio TAMassociati, Italian NGO Musoco and the University of Madrid on the project.

### Local materials

Our involvement began when we worked with TAMassociati to develop open-source guidance for safe, healthy and high-performing insulation materials that are sourced and processed locally in emerging countries.

For Keur Bakar, this meant using traditional Senegalese rammed-earth bricks, but with geometrical modifications and additives in the mix to enhance their thermal performance. Engineering the building using these non-fired bricks and integrating the water-harvesting systems involved teams from four Arup offices: Berlin for material science and building physics; London and Düsseldorf for structural engineering; and Leeds for water.

Together, they helped create a high-quality teaching and learning environment, provided access to safe water and sanitation, and helped to establish local industries and supply chains.

*"I've gained a valuable insight into the importance of using local resources and skills, as these can play a crucial role in driving the design process."*

**Thorsten Braun, Structural Engineer**

The school building is part of the wider H2OS project, which aims to establish an eco-village at Keur Bakar and



share information about building with local materials and techniques in rural Saharan areas. To further this vision, we have created an open-source manual detailing what we learned on the school project.

- School for 90 students
- Teams from four Arup offices
- Project began in 2015

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Projects 2017-18



Global Challenge

The next three years

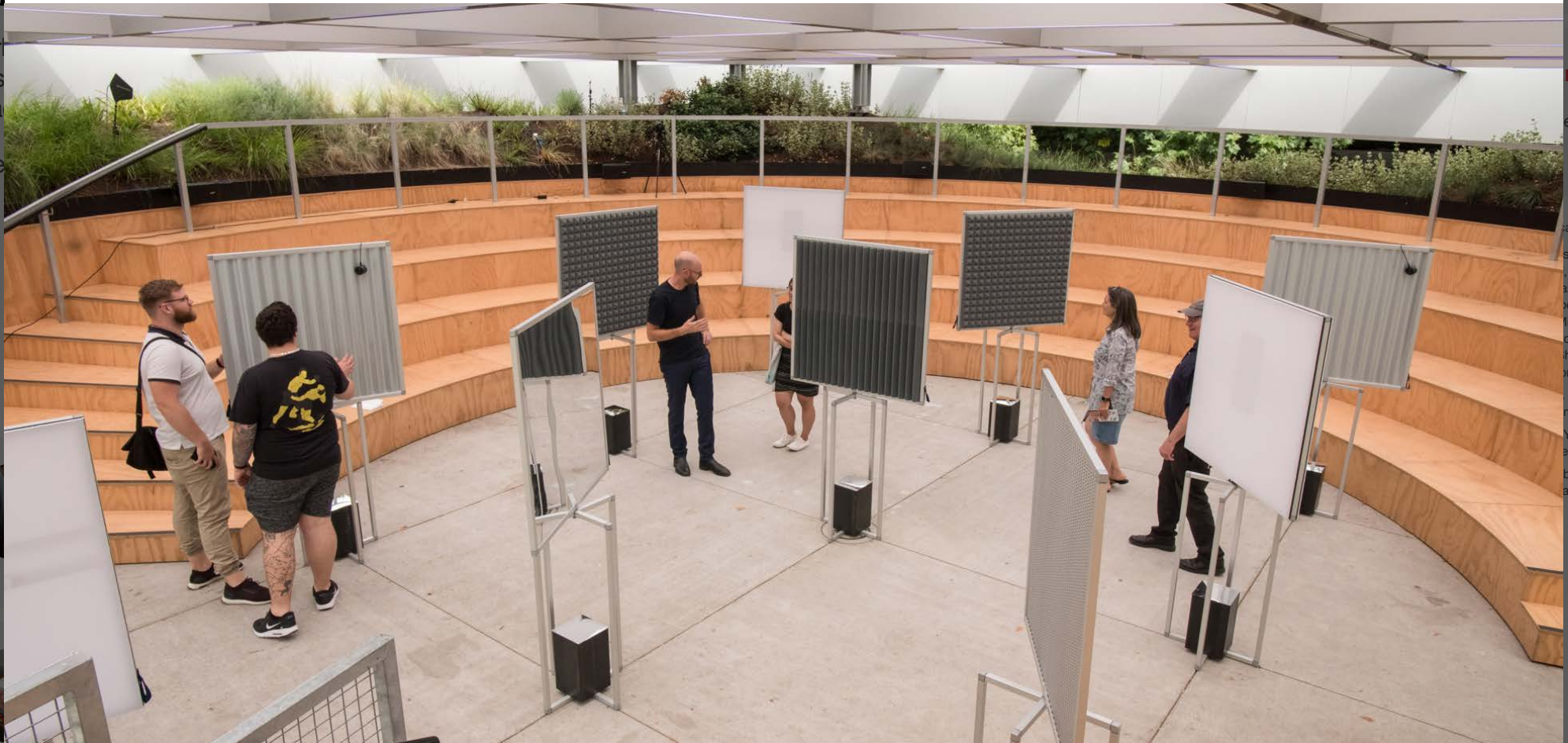
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## HIGHLIGHTING THE IMPACT OF DEMENTIA

Australia



In Melbourne, we used our acoustic design expertise to create an installation for the Biennial National Dementia Conference that illustrated the devastating effect Dementia can have on the senses. Working with Bloxas Architects and charity Dementia Australia, we aimed to show how people living with Dementia can find everyday sounds threatening and overwhelming. The design used a mixture of sound from very focussed 'audio spotlights'

together with completely untargeted background noise. Using rotating panels that visitors were encouraged to move, we created a sound field that was mixed and distributed in unexpected, ever-changing, and often confronting ways. With Australia alone expected to have one million Alzheimer's sufferers by 2050, the project shows the importance of designing environments that enable people with cognitive impairments to live full lives.

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## MENTORING REFUGEE ENGINEERS IN EUROPE

Netherlands / Denmark



Arup people in Amsterdam and Copenhagen have supported engineers from refugee backgrounds as they rebuild their lives and their careers.

In Amsterdam, eight Arup staff worked with a Dutch HR firm to host a workshop for seven people. Our Copenhagen office hosted – for the second year in a row – 25 people as part of a programme run by The Danish Society of Engineers (IDA) and The Professional Engineering Academy (PEA). The events helped participants build their self-confidence and learn more about developing their careers.

One engineer from the PEA also joined Arup on a 12-week internship, and was subsequently accepted to study for a master's in structural engineering at the Technical University in Denmark (DTU).

- 12-week internship in Amsterdam
- Hosted over 30 people

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## CREATING LEARNING OPPORTUNITIES FOR CHILDREN IN HONG KONG

Hong Kong



In Hong Kong, 25% of children live below the poverty line, reducing their chance of a good education. As part of our partnership with local charity St James' Settlement, Arup is helping to improve learning opportunities for underprivileged children.

### Reading and drama

We have continued to sponsor 40 students from two primary schools on a programme that fosters an interest in reading and builds self-confidence through drama and storytelling. As part of this, 20 students performed a short play for a group of local toddlers, as well as reading to the children and holding a tea party. Five Arup employees were invited to join in the fun, getting a chance to engage with the students directly.

*"We appreciate how Arup's volunteers actively participated in storytelling with kindergarten students. The event would not be a success without the support from Arup."*

Lorraine Chow, Project Officer,  
St James Settlement

### Photography skills

The children are also learning photography skills, and had the chance to apply these on a field trip with Arup colleagues to photograph iconic architecture. For the Arup staff, it provided an opportunity to see how young people interacted with buildings, what they valued and what they deemed photogenic. For the students, it was a chance to boost their self-confidence and broaden their horizons.

*"Before joining Arup, I worked in the media industry and the cameramen and photographers I worked with were almost invariably male. On this photography tour, there were many girls from the secondary schools who showed their talent and passion for the genre. This tour taught and encouraged us to explore the world through the camera lens. For some, it also opened the door to a future career."*

**Jingyi Xiang, business services,  
Hong Kong office**

"The event would not be a success without the support from Arup."

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## RESPONDING RAPIDLY TO THE EARTHQUAKE IN MEXICO CITY

Mexico / Global

A rapid response from Arup specialists on the ground and expert volunteers around the world, working with NGO Salva tu Casa, helped Mexico City return to normality after a major earthquake.

### Expertise on the ground

Structural engineering specialists from our Mexico City and San Francisco offices were already on the ground inspecting clients' buildings in the aftermath of an earthquake on 7 September 2017, when a second quake struck on 19 September. Although its epicentre was beneath the central area of Mexico, soft soil amplified the motions and caused some buildings in Mexico City to collapse.

Our team immediately recognised the need for a wider, coordinated response. Drawing on Arup's Disaster Response and Recovery Fund and working with Salva tu Casa, they mobilised over 70 structural engineers around the world, who gave their time to carry out more than 2,000 virtual building assessments.

### Remote, virtual support

Salva tu Casa set up a website that enabled the occupants of earthquake-damaged buildings to request an inspection by submitting their details, including photos. The virtual assessments carried out by our engineers helped to prioritise physical inspections and establish whether buildings were safe.

The assessment and inspection service, which became the official database for registering damaged buildings in Mexico City, was free for users.

*"This happened in offices and homes of Arup employees 24/7 and across the globe. By the end of October we had carried out 2,000 assessments. These identified 10% of the buildings as high priority and Salva tu Casa was able to visit all of these to carry out detailed physical inspections."*

**Francisco Ciruela-Ochoa, Mexico City office**



- Over 2,000 virtual building assessments carried out

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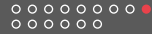
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## SUPPORTING HOMELESS ADVOCACY IN SAN FRANCISCO

USA



A much-needed office upgrade will enable the Bar Association of San Francisco's Homeless Advocacy Project to focus on helping 1,500 vulnerable people every year through free legal advice on issues such as benefits, eviction and immigration.

Staff and volunteers had been struggling through cold winters and hot summers with no heating or cooling in their Justice and Diversity Center (JDC) office. Our project team designed a new heating and ventilation system plus a major electrical upgrade, and saw the project through construction – receiving JDC's Community Service Award for their work.

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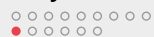
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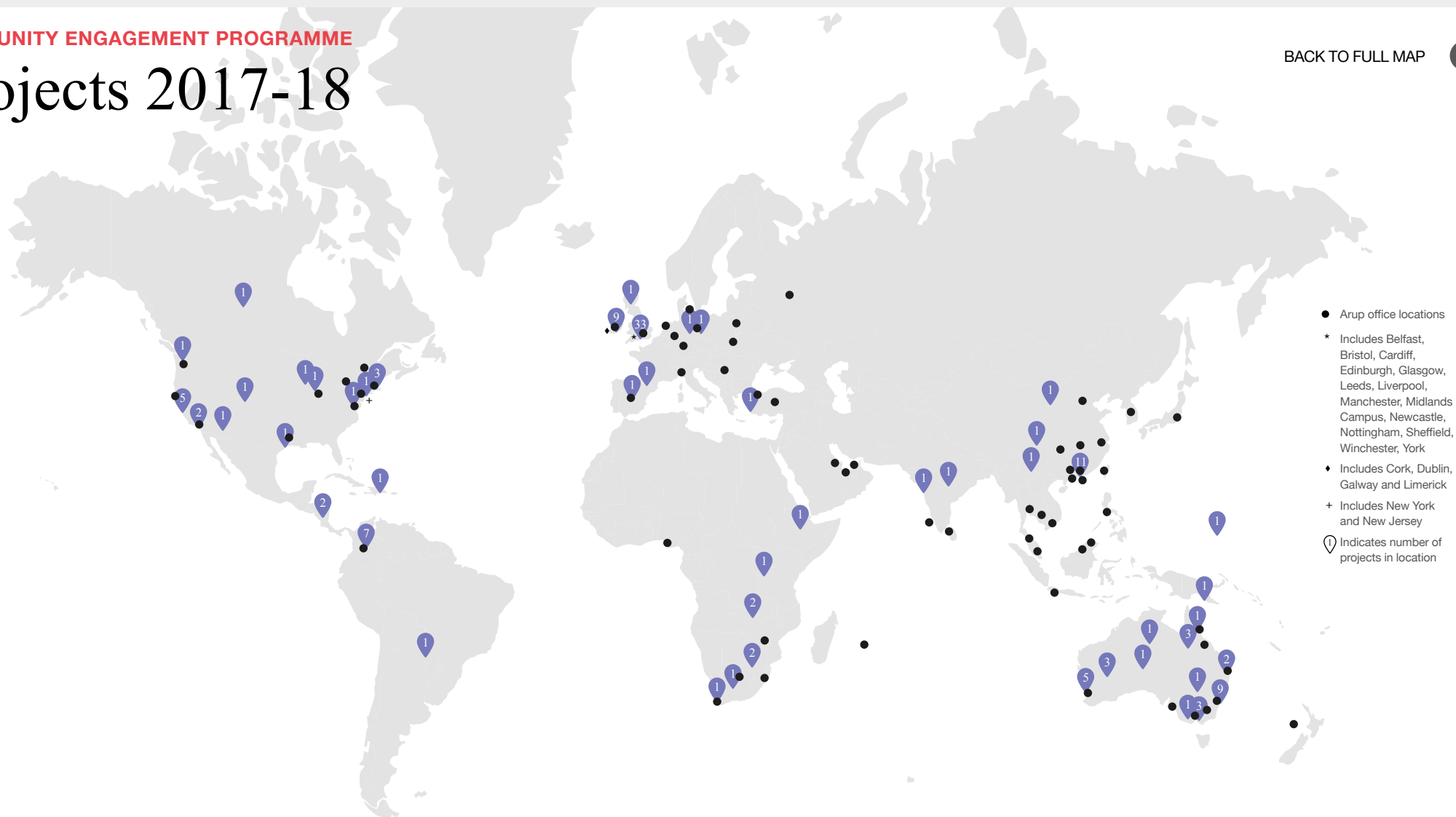
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## COMMUNITY ENGAGEMENT PROGRAMME

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## Our funds



### Local Engagement

Using our time and skills to support organisations and communities local to our offices

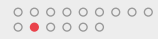
£1.45 million invested to support 132 projects and over 200 activities that use our time, skills and knowledge to support organisations and communities local to our offices across the world. More than £200,000 fundraised by staff globally.





Thank you

Projects 2017-18



Global Challenge

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## COMMUNITY ENGAGEMENT PROGRAMME

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Our funds



### Developing Countries

Working with community based organisations in developing countries to improve lives

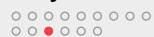
£233,000 invested to support 18 projects providing technical assistance to community based organisations in developing countries so they can better address issues and improve lives.





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## COMMUNITY ENGAGEMENT PROGRAMME

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## Our funds



### Disaster Response & Recovery

Working with partners on the ground to provide staff and resources, deployed and remotely, to support the response at every stage of a disaster

£187,000 invested responding to 6 separate disasters via 10 projects. Enabling our people to work with aid agencies and other partners on the ground to support the humanitarian response at every stage of a disaster, both deploying staff and helping remotely. Also £60,000 donated to humanitarian organisations.





Thank you

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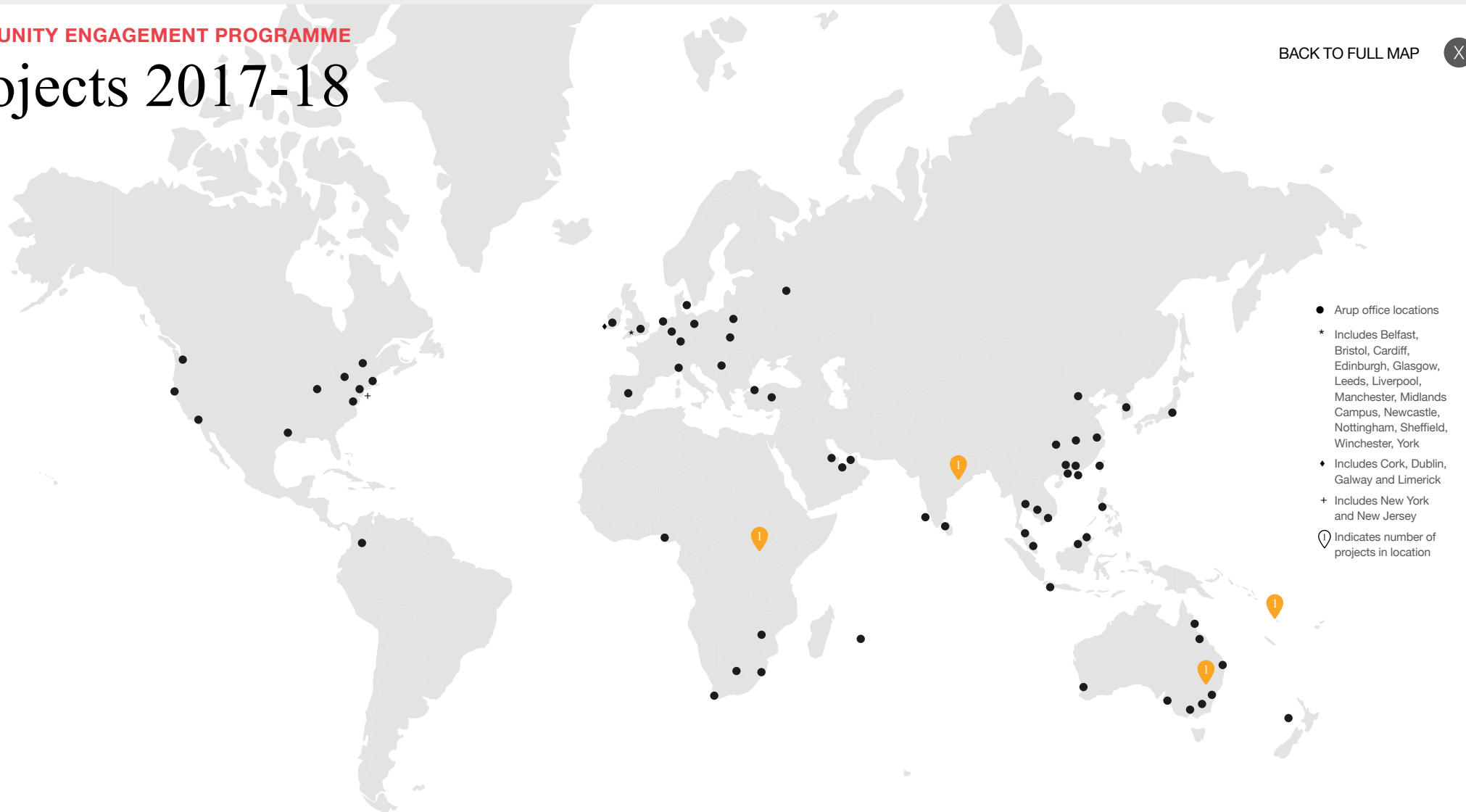
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COMMUNITY ENGAGEMENT PROGRAMME

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Our funds



Global Challenge

Staff and NGOs partner on projects to tackle the UN SDGs at much larger scale

Launched in May 2017, last year we invested £233,000 as 44 project ideas were considered from teams around the globe. Four projects were approved and launched, 5 more are approved and ready to start – tackling the UN SDGs 6 and 7 which target clean water & sanitation and affordable, clean energy.





Thank you

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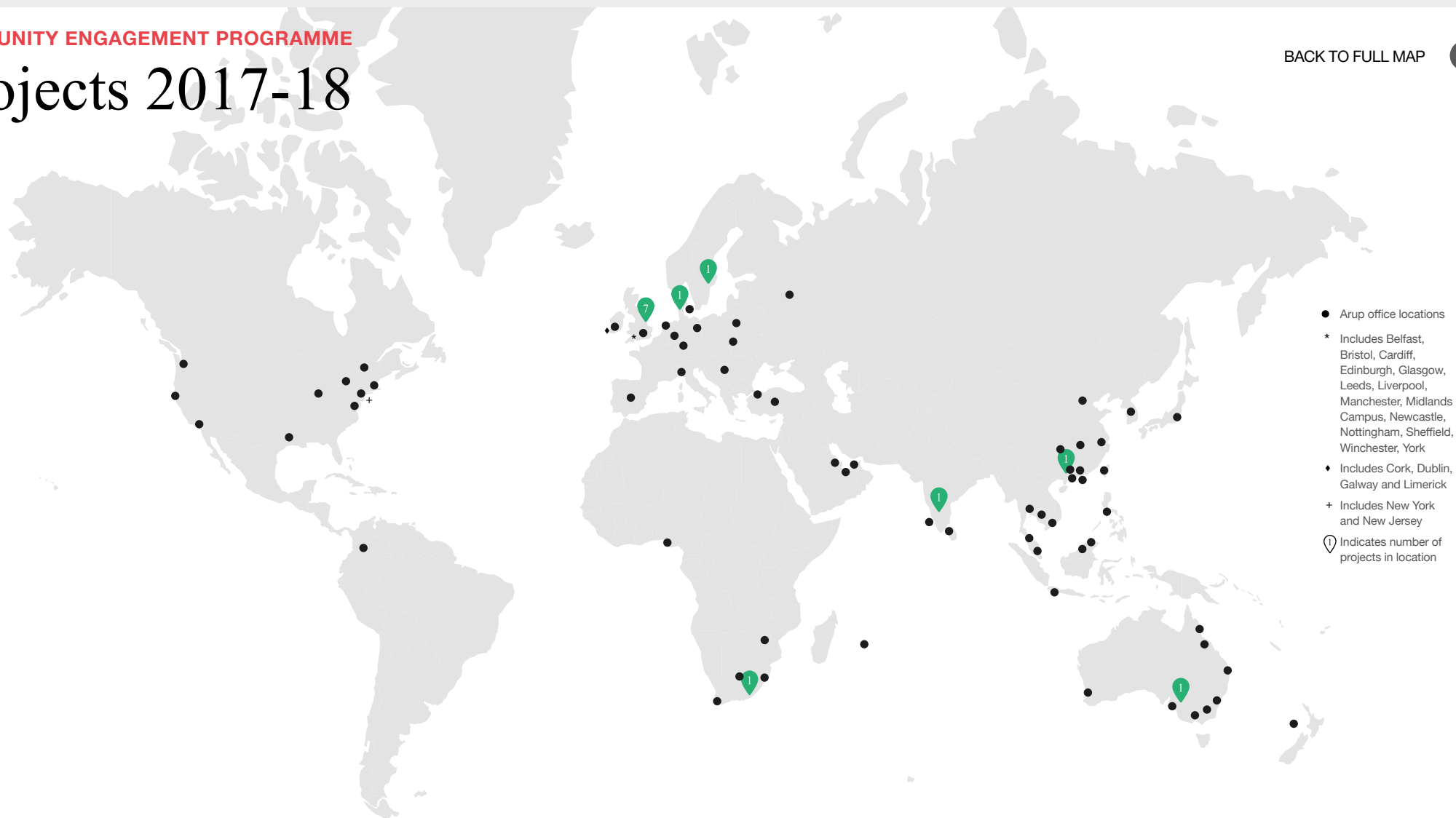
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## COMMUNITY ENGAGEMENT PROGRAMME

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## Our funds



### Education

Supporting built environment education initiatives around the world through our partnership organisations

£525,000 contributed toward strategic projects with The Ove Arup Foundation and the Africa Education Trust (AET), including: sponsoring over 80 students as part of AET annual programmes; supporting 16 international young professionals to attend World Water Week; secondments via Transitioning Cities programme; and, many more initiatives.





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## Our funds



### Carbon Reduction

Kenya Cookstoves Project: Providing efficient cookstoves to cut carbon emissions and improve health in urban Kenya

£325,000 was contributed to our partner ClimateCare in 2017-18 as part of a new multi-year programme to supply more than 20,000 cookstoves to Kenyan communities in and around Nairobi through micro-financed loans. Payments are through savings in fuel costs for the stoves that use less than half the charcoal of other methods. This initiative will reduce carbon emissions by 80,000 tonnes CO<sub>2</sub> over 4 years

and significantly improve the health of families by drastically improving air quality within the home – removing the smoke from open fires that causes eye and respiratory infections which disproportionately affect women and young children. Good progress has been made despite challenging economic and political conditions locally and the project is provisionally projected to meet its first year targets.



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## COMMUNITY ENGAGEMENT PROGRAMME

# Rising to the Global Challenge

Arup has committed to invest £5m over five years to collaborate with communities and partners in designing and implementing solutions with projects at larger scale that help achieve the UN Sustainable Development Goals.



Of the 17 UN SDGs, we are currently focusing on projects aligned to SDG 6 'Water and Sanitation' and SDG 7 'Affordable and Clean Energy'. The first two rounds of the Global Challenge saw 44 project teams made up of staff and external partners, submit ideas for consideration. Shortlisted projects were supported with incubation funding to develop their ideas further, before pitching to a panel of reviewers. Following the first two rounds, nine Global Challenge projects were successful in their bids for funds.

Nine projects improving access to water, sanitation and energy:

1. Improving the resilience and livelihoods of smallholder dairy farmers in Sri Lanka through solar-refrigeration
2. Building community capacity for improving water supply in Northern Uganda through integrated monitoring using digital devices
3. Delivering integrated drinking water and sanitation services to rural communities in the Dry Corridor of Guatemala
4. Water, hygiene and sanitation in rural Mozambique: delivering services, improving capacity and developing a social enterprise model
5. Water Up: recording and sharing proven traditional approaches to natural water management to enable rural resilience across continents

14 partner  
organisations to date

44 ideas  
submitted

£5  
million

5  
years

2  
SDGs

94 staff  
on project teams

9 projects  
being delivered by  
teams from across Arup

Over £1m  
already allocated





Thank you

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## COMMUNITY ENGAGEMENT PROGRAMME

# The next three years

Thousands of Arup people from across regions, skills groups and grades have already had the opportunity to make a real difference through our Community Engagement work.

Over the next three years we will continue to evolve the programme so that even more people can get involved and the communities we support can receive the greatest possible benefit.

We will encourage more people from a broader spectrum of disciplines – and more people from senior grades – to take part. Increasing awareness of the programme will also help the firm recruit and retain talented people – many already cite Community Engagement as a reason for choosing Arup.

To ensure our people can make the biggest possible impact, we will carefully target our Community Engagement effort in line with key UN Sustainable Development Goals, which will be an important part of the broader firm's commitment to these goals.

## 3 years 3 aims

*Our ambitious three year strategic plan for Community Engagement set out three aims we want to deliver by 2021 to continue to evolve, focus and grow our programme.*

### MAXIMISE OUR IMPACT

- Target the UN Sustainable Development Goals
- Invest in projects that can grow or be replicated
- Collaborate across Arup regions
- Invest in our disaster response and recovery

### MEASURE, EVALUATE AND REPORT

- Deliver an impact measurement system
- Report on outcomes and impact
- Share lessons with partners and our industry

### INCREASE OUR VISIBILITY AND PARTICIPATION

- Tell the Community Engagement story inside and outside of Arup
- Increase support and participation across Arup

Of staff who participated in Community Engagement:

(based on a survey of this year's team members and project managers)

81%

said Community Engagement influenced their decision to join Arup

17%

of project managers were aware of the programme before they joined but...

84%

...said it contributes towards them staying with Arup

95%

said Community Engagement makes them feel more connected to Arup

97%

said they will take part in future Community Engagement projects



