

Julie's Bicycle

CREATIVE • CLIMATE • ACTION



**Culture, Climate and Environmental Responsibility:
Annual Report 2021 – 22**



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Introductions



This report covers the period following the pandemic, as arts organisations, museums and libraries cautiously and carefully began to resume their day-to-day activities and welcome back visitors and audiences.

The number of organisations that have provided the data necessary to compile this report shows the continuing commitment by the creative and cultural sector to understand, and reduce, its environmental impact. In doing so, they set an example not just to others within the sector but also in our

wider society. This is shown through the breadth and depth of responses to the Beyond Carbon survey., which allows us to dig deeper into accomplishments and innovative work across the sector. The responses demonstrate how action can be based in practical solutions to the environmental crisis we all face, and how our Environmental Responsibility Investment Principle is both ambitious and achievable.

That is also evident in the continued success of the Spotlight programme, which provides focused support to a cohort of our largest National Portfolio organisations that are responsible for some of the highest carbon emissions. Its ambition is to reduce their environmental impacts, develop Net Zero carbon targets, and provide training opportunities and resources to help them do so. I am pleased to report that this group has exceeded their targets for reducing both the amount of energy they consume and their carbon emissions. It has contributed to a total reduction of 35 percent in emissions since the programme started in 2018. The programme highlights the benefits of consistent and well-placed support, investment, and time.

At Arts Council England, environmental action has formed a key part of our funding arrangement with organisations for a decade. That commitment has gone hand-in-hand with supporting the creative and cultural sector through our partnership with Julie’s Bicycle. I am pleased to say that we have awarded a new contract Julie’s Bicycle so that they can continue this work, both by helping the creative and cultural sector be leaders and by demonstrating how reducing our environmental impact is possible, achievable, and sustainable.

Sir Nicolas Serota

Chair of Arts Council England



98.9%

of organisations believed that it is important for Arts Council England to continue helping their NPOs deliver a more environmentally sustainable future.



Culture is mission critical to meeting our climate goals and many organisations are doing what they can to keep 1.5 degrees alive. This isn't easy. The government's optimistic Net Zero Strategy: Build Back Greener, published just over a year ago did not anticipate the energy crisis. None-the-less, the strategy endures, as does the commitment of the creative community; a recent survey undertaken by Julie's Bicycle identified that the sector has already '...taken a leading role on the international stage in developing approaches to tackle Net Zero' and furthermore, '...the sector's creative problem-solving and design expertise can be deployed across wider industrial and public sectors to support their transition to Net Zero'.

Culture matters and people are beginning to notice. For the first time ever, national governments at COP27 included cultural heritage in statements on both loss and damage, and adaptation. This recognises that culture is both an asset to be protected from climate impacts and a resource to strengthen communities' transformative change.

Culture is uniquely equipped to educate, enable and inspire change. Through the Arts Council Portfolio reporting we have seen real ownership of the type of actions needed, and a rich and diverse range of benefits as a result of engaging with environmental issues. The gains from acting are being felt by organisations, but also witnessed by others, generating more momentum for change. The commitment of Arts Council and the portfolio has created a model which others are already adapting and accelerating. This report shows where real progress has been made, and where the most effective interventions are now. We are all still searching for sensible ways to decarbonise, and to restore what has been lost.

Making the changes needed to tackle our greatest global challenge, will require paying attention to culture as it manifests in our past, our present and how we imagine, and make our future.

Alison Tickell

Founder and CEO, Julie's Bicycle



Culture matters and people are beginning to notice.



Alison Tickell

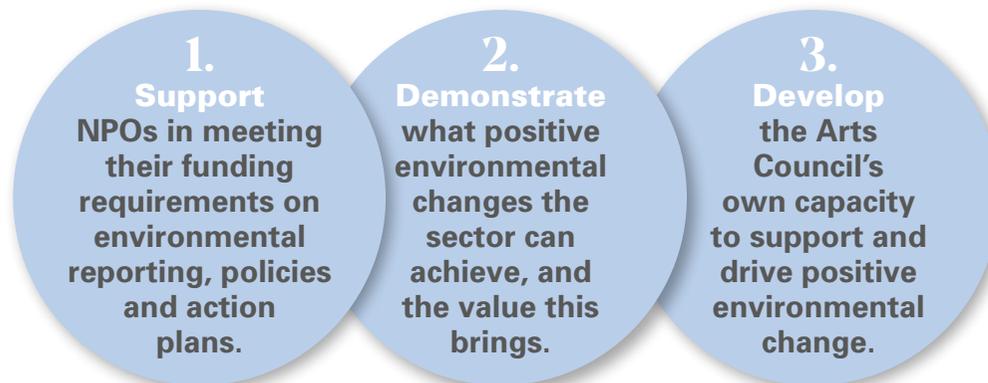
Arts Council England’s Environmental Programme

2018-22

Arts Council England’s Environmental Programme launched in 2012 and was the first example of a cultural body embedding environmental reporting into its funding agreements. Delivered in partnership with Julie’s Bicycle, this pioneering policy has helped to develop understanding, agency and leadership on climate and the environment across the cultural sector.

For the 2018-22 period, there are 828 National Portfolio Organisations (NPOs), all of whom are supported by a rich programme of training, events, resources and thought leadership opportunities. This annual report records the portfolio’s environmental progress and celebrates its achievements in driving positive change across governance, operations and creative practice.

The aims of the Environmental Programme are to:



Key programme strands:

- 
Environmental Reporting – NPOs completing their environmental reporting requirements supported by Julie’s Bicycle **Creative Green tools** (carbon calculator) and helpdesk.
- 
Core programme – training (webinars, events etc.) and **resources** to share and promote good environmental practice and develop the skills for a low-carbon and resilient sector.
- 
Accelerator – a leadership support programme recruiting two cohorts of organisations/consortia to advance sustainable cultural practice and share insights with the wider sector, focused on extending and testing innovative ideas with arts organisations.
- 
Spotlight – a leadership support programme working with a cohort of Band 3 NPOs responsible for the highest carbon emissions within the portfolio. It provides leadership support to reduce their environmental impacts and develop Net Zero carbon targets, and training opportunities and resources.
- 
Arts Council England support – supporting Arts Council staff to develop understanding of, and ability to communicate, sustainability issues and the Environmental Programme and its successes.

¹ Band 3 organisations receive over £1 million in annual funding from the Arts Council

Environmental reporting data for 2021-22

This year we have seen the number of NPOs reporting their environmental data return to pre-pandemic levels. Additionally, we have seen increased levels of engagement in the qualitative Beyond Carbon survey for reporting on environmental actions and benefits.

This is the penultimate year of reporting for the current portfolio. 2022-23 was added to the contract period to reflect the NPO 'roll-over', implemented due to the pandemic. Arts Council England has recently announced its new portfolio of NPOs and IPSOs for the 2023-2026 investment programme.



This year's data is sourced from:

- **Environmental reporting** using the **Creative Green Tools** – completed by **698** NPOs (compared to **482** last year), representing **84%** of the portfolio.
- **The Spotlight programme**, using data on energy trends from all **30 organisations** who have reported consistently since the programme launched in 2018.
- **'Beyond Carbon'** responses as part of the **Creative Green Tools** – voluntary reporting on environmental action and benefits – completed by **584** NPOs (compared to **288** last year), representing **71%** of the portfolio.
- **Case studies** from individual organisations selected to share best practice based on their Beyond Carbon responses (organisations were sampled based on two factors: artform and geographical location).
- An annual **NPO survey** to evaluate the environmental programme, with data collected from 1-30 September 2022 – completed by **117** organisations from across the sector.

95.5%

of NPOs strongly agree or agree The Arts Council England Environmental Programme has made, or can make, a positive difference to the arts sector as a whole.

Voice from the Movement

Fusing art and activism



Ellie Harrison, Artist

1. Tell us about your work as an advocate for climate issues?

My climate awakening occurred in 2009 while studying for a

Masters at Glasgow School of Art. It was the run-up to COP15 in Copenhagen, which many campaigners were describing as our ‘last chance’ for a global agreement to limit emissions. From the safety of my studio, I could dig deep and start making connections between the climate crisis, and the other socioeconomic crises unfolding around us.

I began to question why I was pursuing a career as an ‘artist’ at all. It was clear our greatest imperative was to reduce emissions at all costs – shouldn’t I be investing my time, energy and ideas in tackling that head on?

I made three key decisions which have guided me ever since:

1. Get my own house in order by writing an **Environmental Policy**, outlining the day-to-day actions I was taking to reduce my own emissions, which would provide the foundation that all other activity could be built upon.

2. Transform my artwork to directly respond to these crises, creating awareness and inspiring the world around us to take action.
3. Most importantly, divert more of my time to direct political campaigning.

2. Why do you think it’s important to combine the world of art with the world of activism?

The climate crisis requires us all to become activists. I came to realise that it was the art school education I was privileged to receive – developing an eclectic mix of critical thinking, practical skills, confidence and self-motivation – which had equipped me so well for this task. I chose to channel these skills and attributes into campaigning for better public transport – a key battleground where socioeconomic and environmental justice meet. I launched the national **Bring Back British Rail** campaign in 2009, and since 2016 I’ve been working more in my local community with **Car-free Glasgow** and **Get Glasgow Moving**.

I used to see my artist and activist ‘hats’ as separate – almost as ‘good cop, bad cop’ where the *activist* proposed solutions and optimism about possible social change, and the *artist* asked questions and was more nihilistic in character. But this split personality got me into trouble, causing



The climate crisis requires us all to become activists.



Ellie Harrison





Artists must be embedded in local communities and use their creativity to fight for positive social change.

Ellie Harrison



controversy in 2016 with my provocative 'durational performance' *The Glasgow Effect*. Named after the phrase used to describe Glasgow's 30% worse health outcomes, in comparison to its most similar post-industrial cities in England: Manchester and Liverpool. The premise was simple: for one year I would remain within Glasgow's city limits and only walk and cycle to get around. This action slashed my carbon footprint for transport to zero, and enabled me to get more involved in local community activism. But it also motivated me to strive for a greater fusion between my art and activism, and to create fun, playful and inclusive activist-art, which can get everyone on board.

3. What role can art and activism play in shaping a greener future?

Artists must be embedded in local communities and use their creativity to fight for positive social change. That's what my most recent project **Bus Regulation: The Musical** is about. The idea came about in 2019 when I was writing my book, **The Glasgow Effect**, and I was invited to make a new commission for Manchester Art Gallery.

I'd heard about the *Better Buses for Greater Manchester* campaign and chose to use my platform at the gallery to create awareness for their aim to re-regulate the region's buses. The Musical was a great success and in 2021 the Mayor announced that Greater Manchester would become the UK's first city-region to re-regulate its bus network since the disastrous policy of deregulation

in 1986. Thereby creating a fully-integrated and affordable public transport network enabling everyone to get around easily without needing to own a car – something our other big city-regions also urgently need.

And so my aim became to bring the Musical home to Glasgow in collaboration with the *Get Glasgow Moving* campaign. Delayed by the pandemic, I was finally able to stage the Strathclyde version at the CCA in April with support from Creative Scotland. The final part of the Trilogy is the Merseyside Musical, staged at the Bluecoat in November with support from Arts Council England, to create awareness for the local campaigns for bus re-regulation across the Liverpool City Region. Connecting the three cities in this way, I'm pursuing my own creative research into the links between public transport policy and population health with a stark warning to Glasgow's transport authority, SPT: if you don't follow Manchester and Liverpool's examples, we will fall even further behind.

4. What do you want to see more of from arts and culture?

We need arts and culture that's not afraid to be political or upset the small minority with vested interests in the status quo (aka the private bus companies). We need arts and culture that connects with the real issues facing our communities during the cost of living crisis – be that energy bills, soaring rents or rip-off bus fares and unreliable services – in ways that are inclusive, engaging and, most importantly, empowering so that people can learn how to fight back.



Key Statistics 2021-22

In 2021-22, 698 NPOs reported on all environmental impact areas across 1092 venues, 646 offices, 123 productions, 109 festivals, and 145 indoor events. This statistics snapshot is based on the most commonly reported impacts: energy, water, waste, business and touring travel.

17.6 million km
TOURING



7.3 million km
BUSINESS TRAVEL

(including car, taxi, rail, aviation etc.)



5,025
tonnes
of waste

(including landfill, recycling & composting)



Over
2 billion
litres of
water
reported

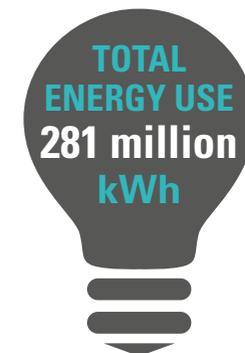
(including usage and treatment)



TOTAL
ELECTRICITY
136 million kWh



TOTAL
GAS
145 million kWh



ENOUGH
TO POWER
18,891
UK households²



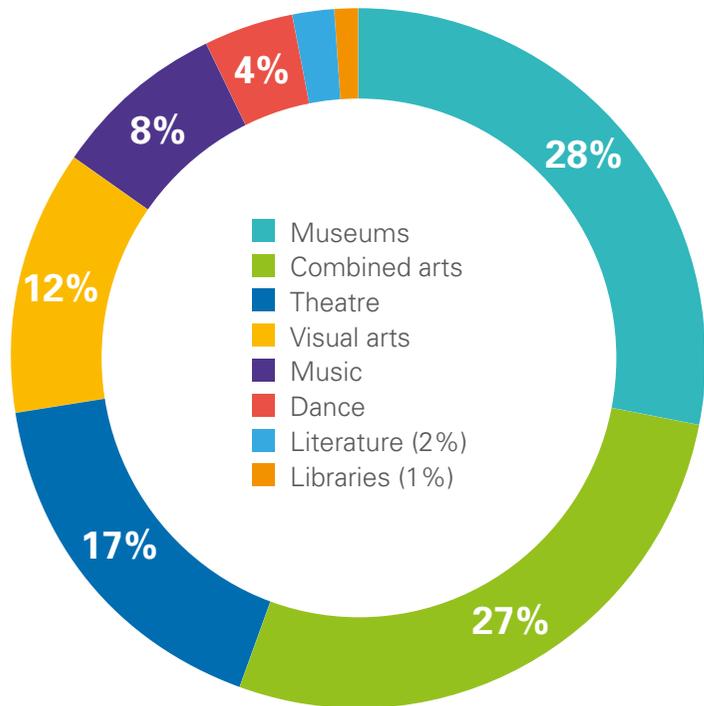
£26.9
million
TOTAL ENERGY
SPEND³
(gas+electricity)



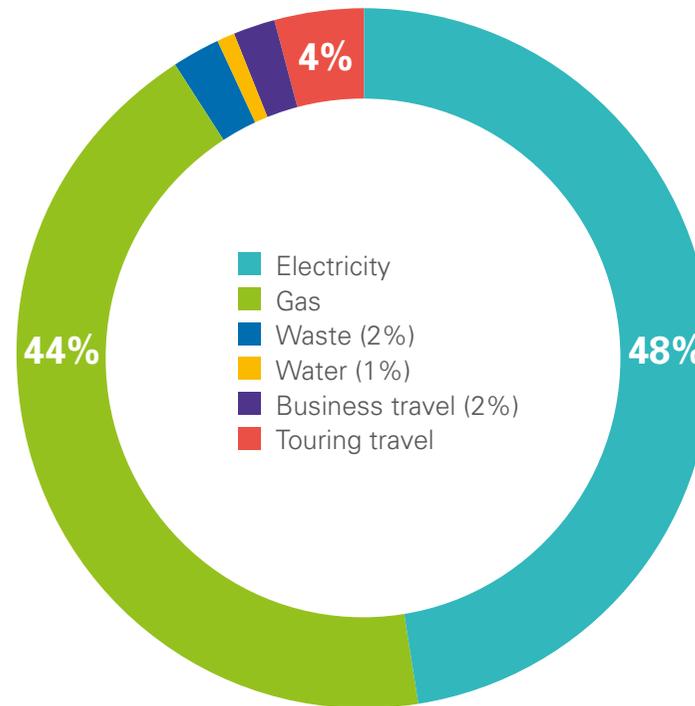
² Based on an annual average usage of 14,900 kWh, using data from OFGEM for 2020: <https://www.ofgem.gov.uk/publications/decision-typical-domestic-consumption-values-2020>

³ Energy spend is estimated. Given the variation in prices between the start and end of the reporting year, we have calculated averages for 2021 Q2-3-4 and 2022 Q1 of gas and electricity prices in the non-domestic sector (source [here](#)).

Total kg CO² per sector



Total kg CO² per impact area



In 2021-22, five NPOs (six buildings) used district heating, and 132 organisations used on-site renewable energy in their buildings.

This year's data shows that the organisations who reported in 2021-22 used **32 million kWh less energy** than in 2019-20⁴. They also reported less overall travel (24.9 million km this year, compared to 30.2 million km in 2019-20), but **double the water use**, and generated **similar amounts of waste** (5,263 tonnes in 2019-20). Comparing impacts reported year-on-year is not without issue⁵, however, this data implies good reductions have been made in energy and travel, but some areas merit further investigation and action.

90.9% of NPOs strongly agree or agree The Arts Council England Environmental Programme has made, or can make, a positive difference to their organisation.

⁴With the portfolio data we have, we can infer an overall picture by referring to pre-pandemic data reported for 2019-20, as the most recent year that we can reference that was not subject to the influence of lockdowns and partial closures, and with reasonably similar numbers of organisations reporting.

⁵Each reporting period, the cohort of reporting organisations varies. Without isolating the organisations that reported like for like in the previous we cannot compare impact data directly.

Energy performance over time

Trends from the Spotlight Programme

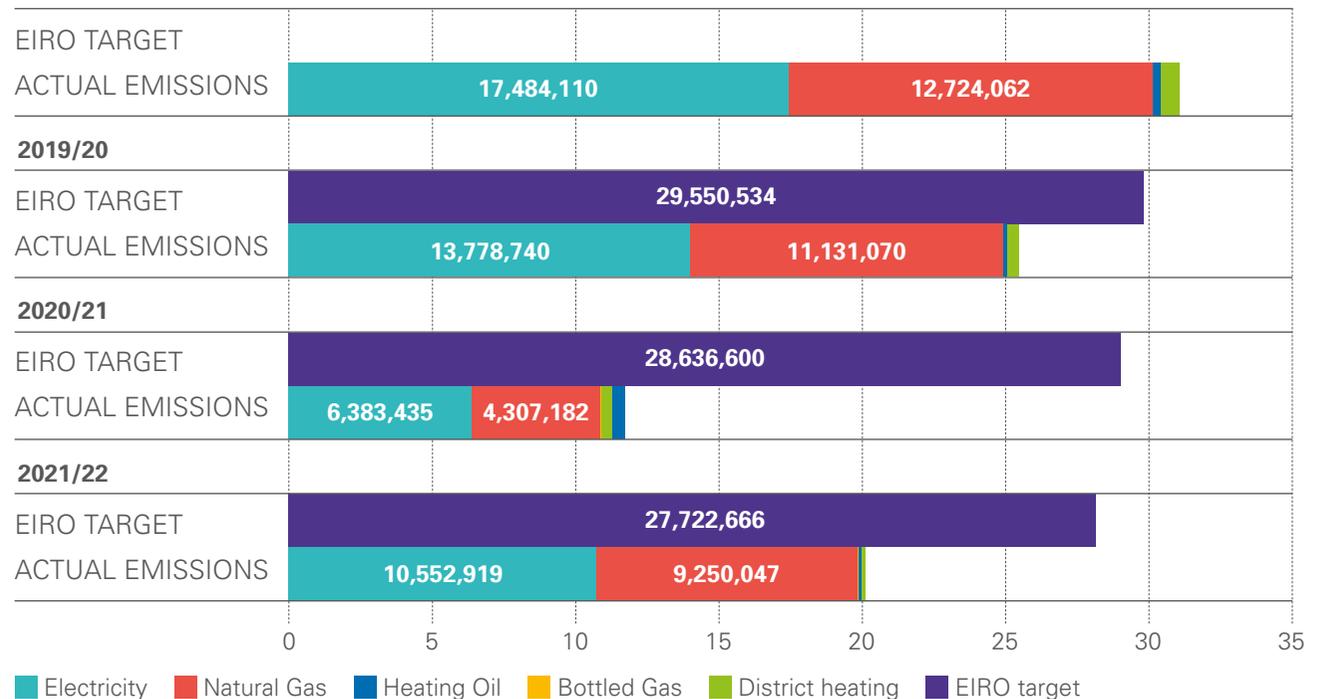
This year we have focused our energy analysis on the Spotlight programme – a cohort of 30 NPO funding Band 3⁶ organisations located across 80 sites, that together were responsible for around 30% of the entire portfolio’s emissions⁷.

The cohort is working to achieve measurable reductions through developing and implementing good environmental management practice. They have set achievable, yet ambitious, Environmental Impact Reduction Objectives (EIROs)⁸, in-line with the goals of the Paris Agreement using Science Based Targets (SBTi). These organisations have consistently reported during 2019-2022, providing data to analyse trends in energy reduction over this period.

The data shows that as a cohort the Spotlight group has exceeded their targets for energy consumption and carbon emissions.

Trend of carbon emissions per impact fuel, kgCO₂e

2018/19 (Baseline)



⁶ Organisations receiving over £1 million in annual funding from the Arts Council

⁷ See 2018/19 ACE environmental report, available at: <https://juliesbicycle.com/wp-content/uploads/2022/01/Arts-Council-Environmental-Report-201819.pdf>

⁸ The reduction targets in kilowatt (kWh) were calculated in line with each organisation’s baseline data provided at the beginning of the programme in 2018-19.

Since the programme began, the group has reduced its electricity usage by 20% and reduced its gas usage by 27%.

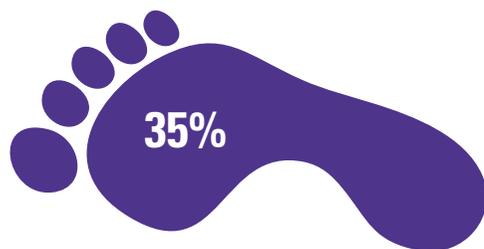
Overall the Spotlight programme has reduced its Scope 1 and Scope 2 carbon emissions by 35%, compared to the baseline year of 2018-19.



GAS REDUCED BY



SCOPE 1 AND SCOPE 2 CARBON EMISSIONS REDUCED BY



Unpacking this overall carbon emissions reduction figure (both gas and electricity), we can see that **electricity use has decarbonised more quickly than gas**. The group has reduced its electricity carbon emissions by 40% and reduced its gas carbon emissions by 27%. This is largely because grid electricity is being decarbonised through the addition of renewable energy sources in place of fossil fuels e.g. Solar PV, wind turbines, biomass. Taken together with reduced electricity usage, through upgrades to improve energy efficiency e.g. LED lighting, and improved energy management e.g. switch off programmes, energy monitoring and Buildings Management Systems, electricity carbon emissions have reduced significantly. Gas meanwhile, requires heating to be replaced by low carbon options including heat pumps, or low carbon district heating. These options are often expensive, and cost is a significant barrier to decarbonisation of the heating systems of many cultural organisations. Additionally, gas use can be reduced through changes to fabric e.g. insulation, double or secondary glazing, and improvements to Building Management Systems e.g. better zoning and scheduling.

While results in any one year are subject to variability, the **overall trend from three years of data since the baseline is downward**. Several factors contribute to this trend, including decarbonisation

of the National Grid. We have calculated that renewable energy coming on-stream in the National Grid has contributed to a reduction in overall emissions of 25% between 2018-19 and 2021-22 (see Appendix 4 – decarbonisation).

This means that on top of grid decarbonisation, the spotlight group has achieved an additional **reduction of 15% in carbon emissions which can be attributed to improved management and reduced electricity usage** across the cohort. Increased home working, shifts in working hours and energy efficiency projects have all contributed to the reductions.

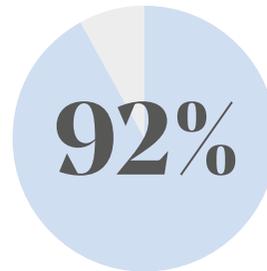


Environmental Action Snapshot

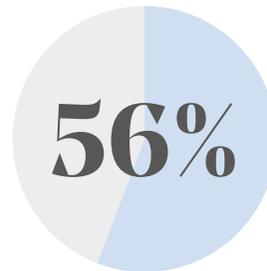
In 2021-22 584 organisations used the 'Beyond Carbon' field on the Creative Green Tools to feedback on environmental ideas and actions other than carbon footprinting (compared to 288 in 2020-21).



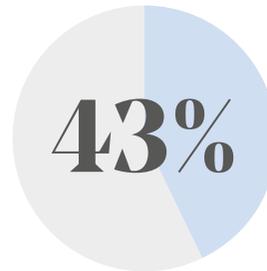
GOOD GOVERNANCE



include environmental sustainability in core business strategies
(compared to 88% in 20-21)

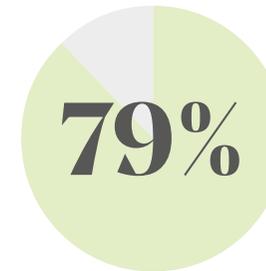


formally recognise environmental responsibilities in job roles
(compared to 55% in 20-21)



now have an ethical sponsorship policy
(compared to 33% in 20-21)

OPERATIONAL PRACTICE



have taken steps to eliminate single-use plastic
(compared to 71% in 20-21)



have installed energy efficient lighting and/or lighting sensors/timers
(compared to 57% in 20-21)



actively promote teleconferencing
(compared to 92% in 20-21)

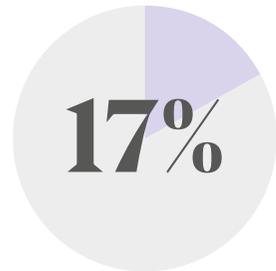
ENGAGEMENT + COLLABORATION



have produced or programmed work exploring environmental themes
(compared to 57% in 20-21)

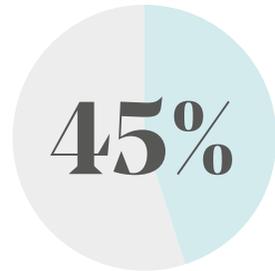


collaborate with other cultural organisations on environmental solutions
(compared to 49% in 20-21)

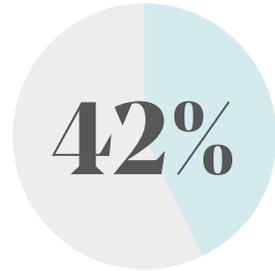


use a Green Rider for visiting/touring productions

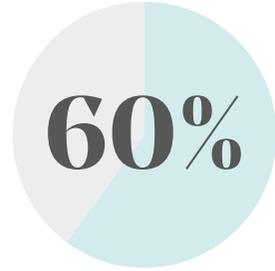
BENEFITS AND VALUE



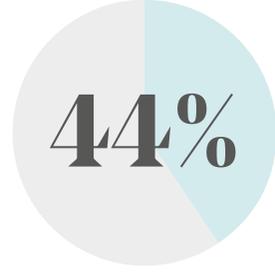
reported financial benefits



reported creative and artistic opportunities



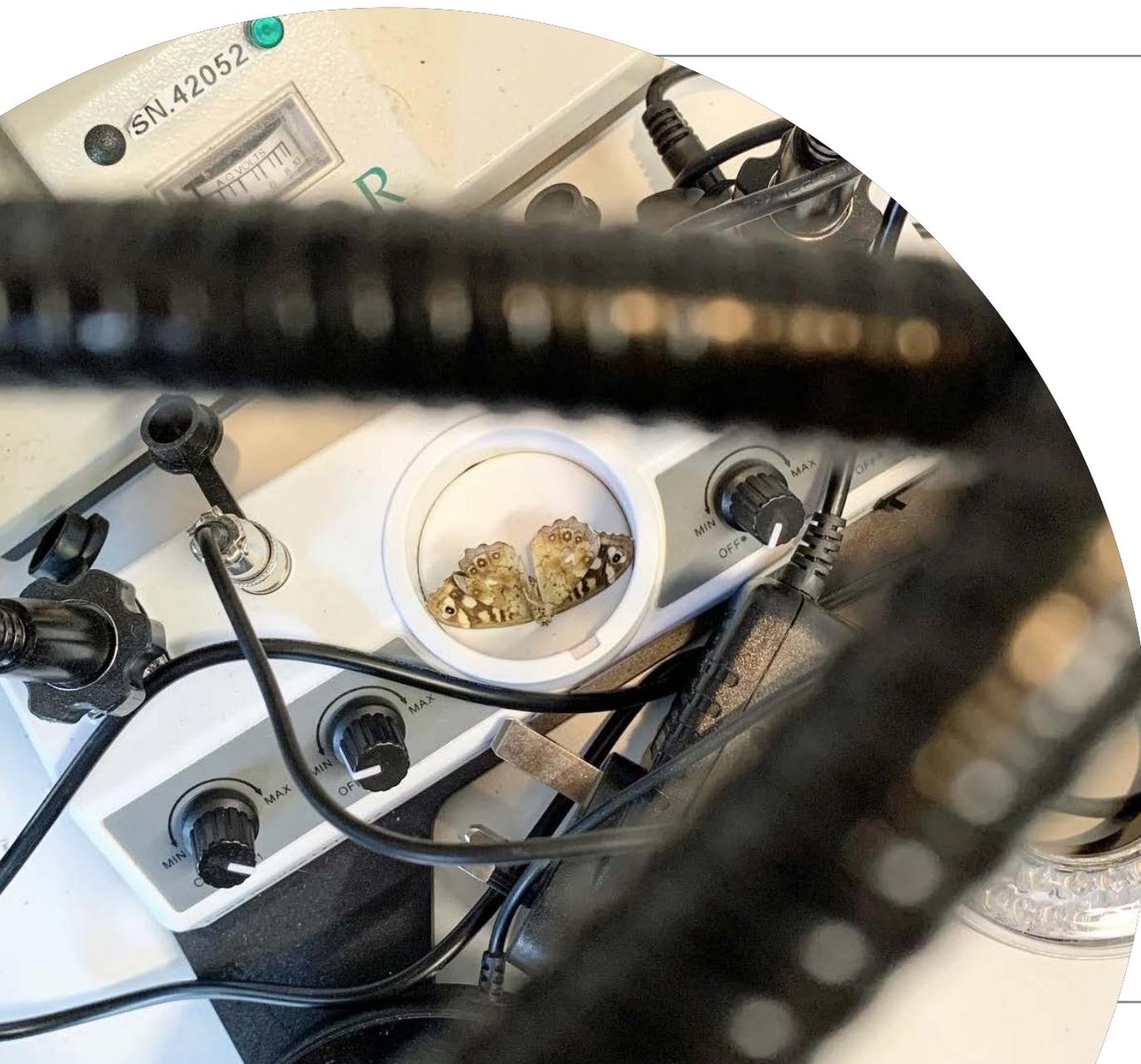
reported team morale and well-being benefits (e.g. programming, commissioning, residencies)



reported reputational benefits



Beyond Carbon trends and insights



Whilst facts and figures are vital to provide benchmarks and for monitoring purposes, understanding the dynamics of behavioural change and tangible actions is fundamental to progress. The Beyond Carbon survey in the CG tools allows NPOs to present qualitative details and stories of their sustainable accomplishments. The breadth of information that emerged from the survey is a testament to the scale and diversity of work that is happening across the portfolio and demonstrates an impressive range of environmental successes. We have pulled out the trends across the data and included a few examples of the brilliant work being undertaken, within each category.

Engagement and collaboration

Organisations have been directly involved in key community groups such as Business Improvement Districts, for example **The Unicorn Theatre** has been selected as a Net Zero Champion for Team London Bridge's Decarbonising Routemap. In addition, there are many examples of organisations with staff members immersing themselves in councils or community groups such as **Beamish – The Living Museum of the North's** Sustainability Manager acting as a 'Single use plastic' committee member for Durham County Council.

Suffolk Libraries reported that the Lowestoft Library Manager is engaging with local providers supporting reduction of food waste for community events. **Threshold Studios** collaborated with a local green scheme. They supported audiences to use information from their exhibits on air pollution and turn it into direct action by signing up to their green charter. Organisations such as **Metal Culture** and **Invisible Flock** are engaging with their suppliers and collaborating to push forward the boundaries and opportunities for improving sustainability.

Benefits and value

Creative or artistic opportunities: As with previous years we saw great work directly addressing a range of environmental themes such as **Film and Video Umbrella's** Ruth Maclennan's 'Treeline' and Rodell Warner's 'Natural Error' looking at deforestation and biosphere collapse respectively. There are creative examples that address climate justice issues, for example, **Index on Censorship** highlighted the **silencing of indigenous communities** when campaigning against climate change. Organisations have also supported artists through residencies and commissions, or have been directly commissioned to develop shows, art, outreach, short writing courses and festivals centred on environmental themes.

Financial benefits: Organisations reported financial benefits related to energy management practices such as installing LED lighting and renewables e.g. solar photovoltaics. By installing LED lights, **Graeae Theatre Company** reduced their energy use and consumption by avoiding the need for air

conditioning to counter the heating effects of the lights. Other organisations identified savings from reducing travel, and from reuse and repurposing of materials. Several NPOs reported attracting additional funding for embedding environmental sustainability and delivering environmental projects, for example **Counterpoint Arts** received funding to partner in projects focusing on environmental issues and actions, and has also increased audience numbers from curating activities and commissions on climate justice and climate breakdown.

Reputational benefits: Organisations have received media attention, had work profiled, received or were nominated for awards in sustainability. For example, **Wakefield Council** received Museums and Heritage Sustainable Project of the Year nomination 2022 for The World of Good exhibition at Wakefield Museum. Arts organisations are enjoying reputations as leaders in sustainability, attracting universities interested in undertaking research, new staff motivated by commitments to sustainability, and invitations to share knowledge and speak at events. Good reputations are helping to build relationships with local councils, communities and attracting visitors. **Balbir Singh Dance Company's** outdoor work and their 'rewilding' repertoire, attracted a commission

from Thackray Medical Museum to develop tranquility walks in a local cemetery in Leeds, celebrating a hidden green space in the city.

Team morale and well-being benefits: Curating and programming on environmental themes, and improving sustainability in organisations, is prompting environmental engagement within teams and staff expressing pride in taking positive action. Some organisations reported that staff away days and involvement in community gardens or allotments has improved workforce morale.



Stories from the sector

Corby Cube Theatre Trust Ltd.

- digital / innovative theatre

Experimented with Virtual Reality as a platform for telling stories and a tool for arts education in their 2021/22 programme. This also supported engagement of low-income schools by decreasing costs (tickets and transport) as well as reducing carbon emissions. Features include – filming outdoors, using only 360 VR camera and working virtually during editing. They’ve collaborated with VR specialists LIVR, engaged local writers, directors and artists to create locally-based work, and screened the plays as a pop-up in high footfall locations including festivals and town centres.



Corby Cube. Photo © Joe Flavin

Balbir Singh Dance Company

- extending engagement with environmentally themed work

Created ‘The boy with the Rollerblades’ in 2019 as a fantastical work for children, based on a world figure skating champion whose talent is tested in a world of melting ice, endangered species and changing weather, introducing children to environmental themes. In 2022 this programme further-developed in partnership with the Willow Tree Academy to create outdoor walks with children and teachers that respond to nature and the environment.



Balbir Dance. Photo © Gavin Joynt

86.4%

of organisations on the NPO programme agree that reporting on environmental impacts helps them better understand their impacts.



Boundless Theatre – bespoke sustainability policies for programming

Produced ‘How To Save The Planet When You’re A Young Carer and Broke’ about a young working-class carer, having to make decisions between life-saving responsibilities at home and being dedicated to save the planet. Boundless wanted to create a mobile, adaptable, and sustainable production that could be toured to communities across London, in partnership with schools, young carers groups, climate activists and community groups. The show was supported by bespoke sustainability policy and plans, and a ‘sustainability representative’ at Boundless to ensure adherence to environmental policy. Nothing was bought new, and everything used had a plan for recycling or re-use after the tour. They also hosted a series of talks for local community groups to hear from campaigners to educate and advocate.

Boundless Theatre – How to Save the Planet When You’re a Young Carer and Broke

New Carnival – greener carnivals

Building on learning from running Towards a Greener Carnival conference in 2020, in 2021 NC ran Making Carnival Costumes Sustainably, an Adult and Community Learning course. The course explored materials, their sustainability, where changes and conscious choices could be made. Following the conference and lockdown zooms, NC established a ‘Sustainable Carnival Alliance’ to continue developing and sharing improved environmental practices. Changes made to carnivals run by NC since include reduced use of plastazote foam (derived from plastic), increased use of cardboard, using only electric vehicles for the 2022 parade, increasing the proportion of costumes made with sustainable materials, and increasing both recycling and material re-use.



The New Carnival Company – ‘Sustainable Carnival Alliance’. Uncredited



The Growing Project Harvest Dinner, 2019, Grand Union.
Photo © Nina Baillie

Grand Union – developing community green spaces

Responding to social and ecological injustices related to land and property ownership in Digbeth, The Growing Project is a community-led growing scheme, creating new gardens developed and tended by people who have been experiencing crisis or find themselves in vulnerable housing situations. The project connects cultural and community work, with artists working with volunteers in weekly sessions to garden, cook or be creative, and is fostering relationships in the local community. The programme is progressing towards sustainable economic methods of what and how to grow and supporting circular economic gains for the sites and the volunteers.

Metal Culture – engaging suppliers and partnering to improve sustainability

Metal culture created a decision-making matrix to help them choose the most sustainable suppliers. The themes include energy, travel, waste, food and materials. The approach means that they now factor in more project planning time and longer negotiation stages.

This allows them to opt for local suppliers and spend more time sourcing suppliers with green credentials, avoiding last minute spending, use of inefficient online services and fast delivery services.

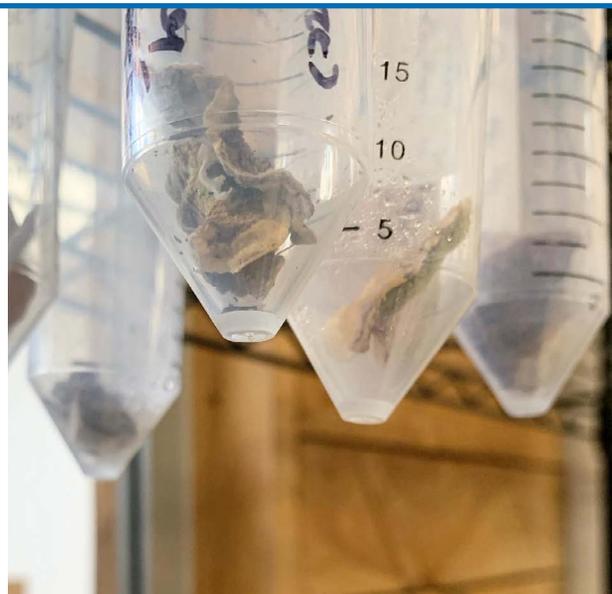
The artists they work with have inspired them to consider different approaches and suppliers, exploring sustainable materials for exhibitions and artwork production.

Working with SHIFT, renewable energy suppliers and with Liverpool’s Low Carbon Eco-Innovatory (LCEI), they are exploring electric heating, green energy and have reduced emissions from travel through flexible working and promoting public transport.

As part of the Estuary festival in Southend they partnered with C2C and Southeastern railway companies, to promote the use of public transport by audiences.

Invisible Flock – innovation for sustainability

Invisible Flock’s studio is designed as a space and a resource to experiment with new technologies and techniques, to collaborate and take risks. They have constructed a new Bio Arts Lab for experimentation that will help to foster the use of interdisciplinary practices, connecting nature with art and design. The space allows scientists and artists to share practices and come up with projects or research that has the potential of benefitting our wider environment. The Lab will manufacture mycelium insulation panels, support education and training in the community, and tackle waste.



Invisible Flock – Bio Lab Two

National Centre for Writing – translating science

In January 2022 the National Centre for Writing produced ‘translating science’ a collaborative project which brought seven scientists from the Norwich Research Park together with established writers so that experts within two very different fields of work could gain fresh insight and inspiration from each other. The scientist welcomed the writer into their world and explained their research, and the writer went away and responded creatively to what they were shown. The result is a series of **stories, poems and essays** aiming to inspire collaborations and influence decision makers.

Suffolk Libraries – community partnerships

In 2021, to empower library staff to develop and lead environmental projects across their 45 sites, Suffolk Libraries allocated micro-grants to enable staff to creatively think about their spaces. Projects had to meet three key criteria: to nurture the community, to be environmentally sustainable and to contribute to nature and biodiversity conservation. Ten libraries were granted a small amount of money to further explore and develop their projects, from creating a wildlife highway in Bury St Edmunds to developing a family-friendly garden, which offset the carbon footprint of a new extension in Gainsborough.

Each library has formed unique and meaningful partnerships as a result of these microgrants, from forest schools to wellbeing initiatives including but not limited to **Genesis (Mencap), Men’s Shed, Red Gables** and **ActivLives**.

These relationships have been fundamental in pushing work forward and deepening the wider benefits which come from nurturing a culture of environmental change, including tackling social isolation, improved wellbeing and sense of purpose.



Photo: Suffolk Libraries, Liv Penny, Stowmarket Garden Project Team

Index on Censorship – centering climate activists

By focusing the **autumn 2021 edition of the Index on Censorship magazine on climate activists**, Index on Censorship highlighted the (often forgotten) stories of grassroots movements fighting to preserve local communities, traditions, and ecosystems threatened by climate change. To develop the content, they worked with a network of local journalists and activists in Australia, the United States and Latin America to deliver on the ground reporting and interviews with Indigenous communities. Alongside the magazine launch, they organised an online event which brought together American lawyer Stephen Donzinger; journalist Bethany Pitts, and Jimmy Piaguaje, member of the Siekopai community and founder of the SERA foundation. They received overwhelmingly positive feedback following the project, which was funded by Clifford Chance, Arts Council and Fritt Ord.

Key Findings

While direct comparisons of environmental impact areas are problematic, the **key statistics** in the report have shown us that progress is mixed. Although significant reductions were made across energy consumption and travel, waste figures have remained largely similar, and water consumption figures have doubled in comparison to pre-pandemic impact reporting. With a year left in the current Environmental Programme (2018-23), this provides some clarity on areas for focus.

Spotlight data has provided clear evidence of emissions reductions, a significant proportion of which can be attributed to changes in environmental behaviour and energy efficiency projects. It has also highlighted the importance of contributions from larger scale interventions such as decarbonisation of the National Grid, and how beneficial a low-carbon grid will be for the sector. Further infrastructure projects and investment support for low-carbon solutions within the sector are needed to accelerate the switch away from gas.

Once again the **Beyond Carbon** survey provides us with many encouraging and positive examples of how engaged the sector is. In the **2020-21** report, we saw increasing focus on environmental sustainability being included in core business strategies and plans; an increase of 10% from the inaugural year. This year's **snapshot** shows

continued growth in good governance, and as a natural progression from last year's focus on strategy and planning, operational practices are also showing consistent and robust areas of growth. Environmental policies are helping to shape internal actions, but perhaps even more exciting, organisations are seeking to influence their supply chains and use their power to inspire change and encourage action further afield.

Last year we reported on how the sector was recovering from the effects of the pandemic; this year we find ourselves in yet another crisis facing the sector: an energy and cost of living crisis. Priorities today are set by acute needs now and the imperative to achieve a sustainable future.

Looking ahead, the sector will need to emerge from this context with a strong focus on both mitigation – finding means to invest in energy efficiency and low-carbon technologies as well as working to reduce impacts across all areas, and adaptation – enabling and nurturing creative responses to the changing climate, centering justice and community. As we move forwards from COP27 these twin objectives will come into even sharper focus.

76.1%
of organisations on the NPO programme use environmental impact data and carbon footprint to inform their planning and actions.



Appendices

Appendix 1: Spotlight and Accelerator organisations

Spotlight organisations 		Accelerator programme Cohort II 
Baltic Contemporary Arts Centre	The Lyric Theatre Hammersmith Limited	Fast Familiar, Abandon Normal Devices and Arts Catalyst
Royal Liverpool Philharmonic	National Theatre	SS Great Britain
Birmingham Museums Trust	Theatre Royal Plymouth	Culture, Health & Wellbeing Alliance
Royal Opera House	Northern Stage	The Courtyard Trust and Watts Gallery: Artists' Village
Bristol Museums	Theatre Royal Stratford East	Horniman Museum and Gardens
Royal Shakespeare Company	Nottingham Playhouse	D6 Culture, And Other Stories and BALTIC
Curve Theatre	Tullie House Museum and Art Gallery	Knowle West Media Centre
Sadler's Wells	Opera North Limited	Live Art Development Agency and Gasworks
Glyndebourne Productions Ltd	Tyne & Wear Archives & Museums	Barbican, Artillery and London Borough of Waltham Forest
Sage Gateshead	Serpentine Galleries	Norfolk and Norwich Festival
HOME Manchester	Unicorn Theatre	
Sheffield Theatres Trust Ltd	Whitechapel Gallery	
Leeds Museums and Galleries	University of Oxford	
Southbank Centre	Royal Exchange Theatre Company Ltd	
Manchester Partnership	Young Vic Company	

Appendix 2: List of case studies

Organisation	Theme / topic	Art Form	Region
BEYOND CARBON			
Corby Cube Theatre Trust Ltd.	digital / innovative theatre	Combined Arts	East Midlands
Balbir Singh Dance Company	extending engagement with environmentally themed work	Dance	Yorkshire
Boundless Theatre	bespoke sustainability policies for programming	Theatre	London
New Carnival	greener carnivals	Combined Arts	South West
Invisible Flock	innovation for sustainability	Combined Arts	Yorkshire
Metal Culture Ltd	engaging suppliers and partnering to improve sustainability	Combined Arts	East
Grand Union Arts CIO	developing community green spaces	Visual Arts	West Midlands
National Centre for Writing	translating science	Combined Arts	South East
Suffolk Libraries	community partnerships	Libraries	South East
Index on Censorship	centering climate activists	Literature	London

Appendix 3: Methodology

Carbon footprint calculation

Carbon dioxide equivalent (CO₂e) is used to express the climate impacts of an activity in a single measure. CO₂e emissions are calculated by applying carbon **conversion factors** published annually by the government. The conversion factors for UK grid energy reflect its carbon intensity, or the amount of CO₂e emissions generated depending on the mix of fossil fuels, renewables and nuclear energy used.

The 2021-22 **carbon footprint** was calculated by applying the conversion factors published by the government in 2021⁹. These were applied to reported energy and water usage, transport (business travel) mileage and waste generated.

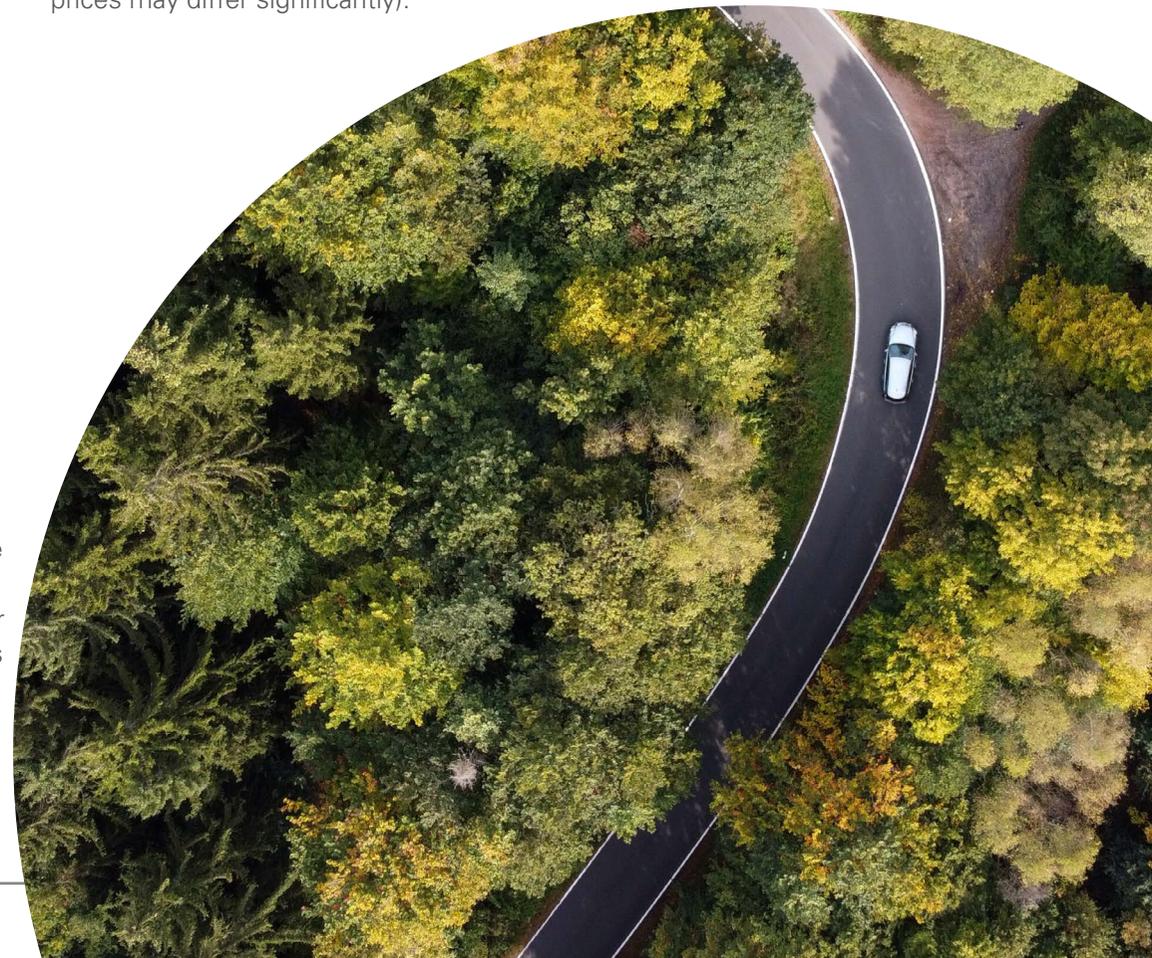
The data used for this analysis came both from self-reporting via the CG Tool and from the Pilio online building energy management software. Data was cross-referenced between these two datasets and missing data was filled in where applicable. The data were analysed for the 2021/22 reporting period, which spans from 1st April 2021 to 31st March 2022.

Energy use, energy price and energy spend

The total **energy use** is based on absolute electricity and gas consumption in kilowatt hours (kWh) reported for 2021-22 on the Creative Green Tools. 469 unique organisations reported energy-related data in the financial year 2021/22. Buildings were filtered to include only those with non-zero electricity use (some buildings don't have gas). This covers predominantly purchased energy and, in some cases, also on-site renewable energy (generally solar photovoltaic or solar thermal panels). The 2021-22 energy use figures, excludes usage of bottled gas and diesel (for generators) in litres, due to very low levels of reporting on this source of impact.

⁹ <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021>

Energy prices have soared throughout 2022. At the time of writing, the gas price has risen from a long term average of 1.7 p/kWh (wholesale price on which is added various network and supply charges) in January 2021 to 10 p/kWh on the 5th of October 2021. Given the variation across the reporting year, we calculated price averages for 2021 Q2-3-4 and 2022 Q1 of gas and electricity prices, referencing the Department of Business, Energy and Industrial Strategy's **'Prices of fuels purchased by non-domestic consumers in the UK'** (actual prices may differ significantly).



The 2021-22 **energy spend** is based on kWh of electricity and gas consumption, applying the averaged tariffs of 16.01 pence per kWh of electricity and 3.51 pence per kWh gas. The cost of onsite renewable energy and district heating is not covered.

Reported on-site renewable energy consumption is 7.9 million kWh. This currently represents about 5.8% of overall electricity use. This is most likely under-reported due to the difficulty experienced by some organisations in getting accurate data on on-site kWh generation as well as on how much is actually used on-site and how much is exported to the grid. On-site renewable energy is considered to be zero carbon, so it does not contribute to the carbon footprint.



Comparison of portfolio impacts across years

Each reporting period, the cohort of reporting organisations varies. Without isolating the organisations that reported like for like in the previous we cannot compare impact data directly. With the 2021-22 portfolio data, we can infer an indicative pattern by referring to pre-pandemic data reported for 2019-20, as the most recent year that we can reference that was not subject to the influence of lockdowns and partial closures, and with reasonably similar numbers of organisations reporting – 636 organisations reported in 2019-20, compared to 698 in 2021-22.

Spotlight trend analysis 2019-2022

Two Spotlight organisations included in the Spotlight trend analysis did not report data in 2021/22. Electricity and gas usage was estimated to match their Environmental Impact Reduction Objectives targets for 2021/22. This is likely a conservative estimate, as previous reporting for these organisations shows that they have demonstrably exceeded their EIROs year-on-year. The total estimates amount to 4% of total Spotlight electricity usage, and 3% of total Spotlight gas usage.

Spotlight target setting methodology

The Spotlight group – 30 organisations across 80 sites – is working closely with Julie’s Bicycle to achieve measurable reductions in line with the goals of the Paris Agreement – limiting global warming to well below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C. The energy and carbon reduction targets proposed for each Spotlight organisation were calculated based on their 2018-19 energy baseline using the **Science Based Targets** (SBT) methodology. The SBT approach used for Spotlight target-setting is the sector-based approach i.e.: the global carbon budget is divided by sector – in this case commercial buildings – and emission reductions are allocated to individual companies and organisations based on its sector’s budget. Targets set are relative – kilowatt (kWh) hours of energy used and kilogrammes (kg) of CO₂e from energy use, both per square metre of floor area.

Appendix 4: Drivers of decarbonisation within the Spotlight programme

Electricity Grid Decarbonisation

Renewable energy being fed into the national grid from wind, solar and biomass energy production has resulted in large reductions in greenhouse gas emissions. Compared to the 2018/19 baseline year, the UK electricity grid in 2021/22 has reduced from 0.28307 kgCO₂e/kWh to 0.21233 kgCo₂e/kWh, a carbon reduction of -25%.

For Spotlight organisations, the 2021/22 emissions from electricity are 40% lower than the baseline emissions. If in 2021/22 no changes were made to the energy usage (e.g., the same amount of electricity of 2018/19 was to be used in 2021/22), the carbon emissions would be 25% lower than those in 2018/19 simply due to decarbonisation of the grid.

This means that for the Spotlight group, the actual carbon emissions associated with improved/reduced electricity usage in 2021/22 consist of a 15% reduction. This reduction is driven by a combination of factors like changes in ways of working i.e. home working and shift in working hours and/or energy efficiency projects.

By accelerating the decarbonisation of the grid, all electricity consumers, both domestic and business, benefit from reductions in carbon emissions.

Decarbonisation

Decarbonisation involves the removal of fossil fuels (mainly gas, but also liquid fossil fuels) and replacing them with renewable/zero carbon alternatives. In the UK, it is necessary to implement a low carbon alternative to gas combustion as the main source of heat. This ultimately means switching to either a biomass/biogas combustion system or heat pump, based on the applicable technology available today. Hydrogen-based combustion systems are another possibility, but the technology for this switch is still in its infancy.

Covid context

The Spotlight programme has operated throughout a global pandemic, which has resulted in some challenges in unpacking all the different factors at play. We know energy use decreased generally across all sectors, but specific elements within certain sectors actually saw heating being maintained to avoid equipment failure and damage to artworks or to meet insurance conditions. The increased use of natural ventilation also resulted in increases in heating and cooling in certain sectors. Therefore, while energy use during the COVID years was overall low (see Culture, Climate & Environmental Report – 2020-21), it wasn't zero as some suggested it could be. The longer lasting effects of this period can be seen in increased home working and shifts in peoples' working hours, factors contributing to the programmes overall emissions reductions.



Appendix 5: Glossary

- **Beyond Carbon** – a new field on the Creative Green Tools for organisations to feedback on environmental ideas and actions beyond just carbon footprinting.
- **Carbon footprint** – a measure of greenhouse gas emissions based on energy, travel, waste etc. most commonly given in tonnes of carbon dioxide (CO₂e).
- **Net Zero** – Net Zero means removing as many greenhouse gas emissions from the atmosphere as are being put into it. Net Zero is about making the largest possible reductions that you can make to your overall footprint, using all of the means available to you. Only the remaining unavoidable emissions can then be offset. This differentiates Net Zero from ‘carbon neutral’, which places greater emphasis on offsets to balance out emissions.
- **Circular economy** – designing out waste and pollution, keeping products and materials circulating within the economy at their highest value for as long as possible, and allowing natural systems to regenerate. This is in direct contrast to the current linear economy based on a ‘take, make, dispose’ model.
- **The Colour Green** – part of the Arts Council’s environment programme, a podcast and Lab exploring issues of environmental justice and training cultural leaders and artists of colour.
- **Creative Green Tools** – a set of free online tools developed by Julie’s Bicycle for cultural venues, events, offices and tours to report on their environmental impacts, calculate their carbon footprint and track progress over time.
- **Climate justice** – Climate justice is both a framework to address historical responsibility for carbon emissions and reduce further climate and ecological damage, and a movement that seeks to redress the systems of power that continue to extract from, oppress and harm people and planet. Climate justice is deeply connected to racial justice, gender and disability, labour rights, land justice, the rights of nature, and environmental justice.
- **Divestment** – generally associated with fossil fuel investment, moving money out of fossil fuels by, for example, choosing banks, pension providers, insurance providers, funders who do not invest in or make money from fossil fuel extraction.
- **Intergovernmental Panel on Climate Change (IPCC)** – the United Nations body which convenes thousands of scientists from all over the globe to regularly assess and report climate change science and resulting implications for policymakers.
- **Paris Agreement** – a global commitment, negotiated within the United Nations Framework Convention on Climate Change and signed in Paris in 2016, to keep the increase in global average temperature to well below 2 degrees Celsius, a target subsequently revised by the UNFCCC to 1.5.
- **Sustainable Development Goals (SDGs)** – in October 2015 more than 150 countries adopted the 17 SDGs to end poverty, protect the planet and ensure prosperity for all by 2030. For the Goals to be reached, everyone must play their part: governments, organisations, businesses and civil society. It is generally acknowledged that in order for meaningful progress to be made towards the SDGs, all parts of society must work together to meet the targets.
- **COP27** is the 27th meeting of the **Conference of Parties (COP)**, which took place in Sharm El-Sheikh, Egypt from 7-18 November 2022. The COP is the decision-making body of the United Nations Framework Convention on Climate Change (UNFCCC) which aims to drive countries to act on climate change. Representatives of the 197 Parties to the Convention have met every year since 1995 to review the work of the UNFCCC, and review the progress made in achieving the objectives of the convention.

Appendix 6: Resources and further reading

Julie's Bicycle resources developed under Arts Council England's Environmental Programme

- Report – [Energy Impacts: Taking meaningful action in the midst of a crisis](#).
- Guidelines – [Environmental Policy and Action plans: An overview](#)
- The Creative Climate Justice [Resource Hub](#)
- Creative climate justice [guide](#)
- Briefing – [Food culture: The impacts of what we consume](#)
- [Taking the Temperature](#) series
- [Culture: The Missing Link – an online event at COP26](#)
- [Policy portal](#) including our COP26 Call To Action and [Arts Council England animation](#)
- Briefing report: [Putting a price on Carbon](#)
- Webinar: [Putting a price on carbon](#)
- Briefing Report: [Environmental Sustainability in the Digital Age of Culture](#)
- Webinar: [Sustainable digital creativity](#)
- Webinar: [Sustainable cultural mobility](#)
- Webinar series: [Creative Climate Literacy 101](#)
- [Creative Climate Chats](#)

Other Julie's Bicycle resources

- Arts Council England "Our Environmental Responsibility: from understanding to action"
- Top Tips Guides for [Museums](#) and [Music](#) sector

Other resources

- Arts Council England new Strategy 2020-2030 [Let's Create](#)





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Julie's Bicycle

CREATIVE • CLIMATE • ACTION

Julie's Bicycle

Founded in 2007 to respond to the climate crisis, Julie's Bicycle is working globally across the creative sector to reduce greenhouse gas emissions and catalyse the green creative economy.

Working with over 2,000 organisations, NGOs and governments worldwide, Julie's Bicycle has developed an approach which harnesses the power of the creative sector to communicate the reality of the climate crisis, advocate for science-based solutions, take bold practical action, and offer support and advice to those who share their vision. The team blends environmental expertise with arts and cultural sector experience, and the freely available resources constitute the most comprehensive library of good environmental practice developed specifically for the arts and culture sectors anywhere in the world.

Designed and developed by Julie's Bicycle, the Creative Green Tools – a suite of carbon calculators and a certification scheme – are the recognised benchmark for sustainability achievements within the creative industries.

Since 2012, Julie's Bicycle has been the Arts Council's contracted delivery partner for supporting its funded organisations in reporting their carbon footprint, and developing environmental policy and action plans.

Twitter @JuliesBicycle

Instagram @julies_bicycle

Charity registration number: 1153441