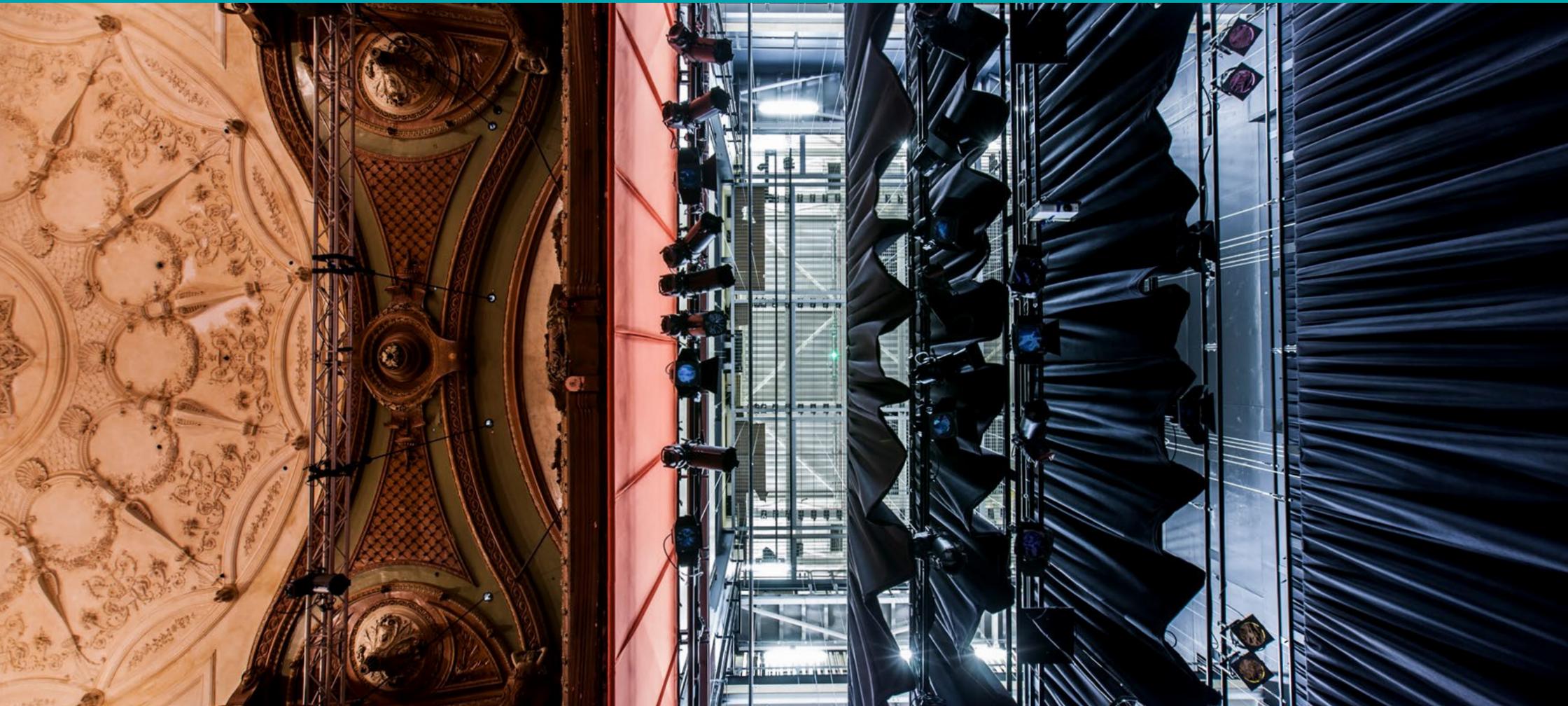


Sustaining Great Art and Culture

Environmental Report 2017/18



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Above: I am the Universe anthology FC
Cover: Old & New View of the grid from the stage – New Theatre Royal Portsmouth. Photo © New Theatre Royal Portsmouth

Foreword



“[Arts and cultural organisations] show us by example how we can all take real action and drive change.”

It's been more than ten years since Arts Council England started working with Julie's Bicycle – the leading global charity in helping the creative community act on climate change. Together, we have found practical and effective ways to help the sector reduce its environmental impact. Our collaboration led to a ground-breaking policy intervention in 2012, when the Arts Council became the first cultural body in the world to include action on environmental sustainability in our funding agreements with National Portfolio Organisations (NPOs)¹. These organisations have risen to the challenge, with a 23% reduction in energy consumption and a corresponding 35% reduction in carbon emissions since 2012/13².

One of our priorities at the Arts Council is to help improve the all-round resilience of arts and cultural organisations. As the findings of this Annual Report show, environmental action isn't just responsible, it makes economic sense. Many arts and cultural organisations report that they generate financial

benefits as a direct result of environmental initiatives. In the last six years, participating organisations saved £16.5 million in energy costs.

These figures only scratch the surface. Organisations can demonstrate significant benefits by embedding environmental sustainability into their business practice. These include improving staff engagement and motivation, encouraging more consistent building management and enhancing reputation in the eyes of audiences and stakeholders. They are also part of the new creative ecology, with suppliers responding to the demand for greener products and services. Nearly a quarter of the National Portfolio has now switched to a green energy tariff, helping to drive demand for clean energy across the UK.

Arts and cultural institutions, and the artists they work with, teach us about ourselves and our place in the wider world, delighting, stimulating and inspiring in equal measures. We need their influence now more than ever. In October, a landmark report by the UN Intergovernmental Panel on Climate Change warned that “rapid far-reaching and unprecedented changes in all aspects of society” are required to limit global warming to 1.5C, highlighting the devastating difference between this temperature increase compared with 2C. The arts can help communicate the urgency of this message to the public, programming

work that engages with environmental issues and shifting social attitudes. By highlighting the steps that arts and cultural organisations are taking to become more sustainable, they show us by example how we can all take real action and drive change.

I am impressed by the lead that NPOs have taken. The Arts Council is also committed to reducing its own environmental impact and we've had some encouraging results from the Smart Working approach we are currently trialling. In our Cambridge office we have reduced staff travel mileage by 30% and paper use by 48%.

Changing the way things are done is never easy, but the Arts Council England Environmental Programme has shown that creative thinking and hard work can bring results. There is much more to be done, but I know the sector will continue to promote innovative ways that will help us to build an environmentally sustainable future.

Sir Nicholas Serota
Chair, Arts Council England

¹ Including Major Partner Museums (MPMs). As of April 2018 we have fully integrated MPMs into the National Portfolio, so for the purpose of this report will be referring to all organisations as NPOs

² Based on a core group of 136 organisations who have consistently reported since 2012/13

Introduction



“Arts Council England’s policy intervention has prompted hundreds of creative organisations to demonstrate how a creative ecology can work.”

This report is a concise review of 2017/18, and the end of a six-year policy intervention in climate action by Arts Council England, Julie’s Bicycle and an exceptional community of culture, arts and creative organisations. It’s a story anchored in hard data – environmental impacts, numbers, comparisons and scenarios. They help us to learn, to collaborate, to plan and to scale. The story tells how carbon literacy across a rich cultural community can yield so much more than carbon reductions. Starting from the basics – carbon footprints – this deceptively simple policy is demonstrating how a sustainable cultural sector might actually work; inspiring deeper exploration and connections between climate and social justice, investment and innovation, clean energy and new materials, empathy and biodiversity. Some may argue that focusing on impacts is missing the point, that environmental action across the arts is best served by focusing on artists and content. This is a misconception: we need both.

The programme has asked for annual data, policies and action plans from all National Portfolio Organisations (NPOs). To support this, Julie’s Bicycle has delivered a rich programme: guides, events, demonstrations, blogs, research, analysis, networks and knowledge-sharing, all of which has amplified and nourished sector collaboration.

The creative industries account for £92 billion of Gross Value Added (GVA) and two million jobs, and they are growing twice as fast as the economy as a whole³. The material impacts associated with an economy of this size are significant. Simultaneously, the UK low carbon and renewable energy (LCRE) economy grew by 5% to £42.6 billion in 2016 (from £40.5 billion in 2015) and continued to account for around 1% of total UK non-financial turnover⁴.

The programme results show we are ahead of the game: strong year-on-year reductions in energy use across the National Portfolio – and the resulting £16.5m financial savings created since 2012/13 – is evidence that this is working. Together, the creative and the green economies could be exponentially powerful agents of change. The figures alone do not capture the detail of change, the daily acts of commitment: tour planning, procuring for exhibitions, concessions for festivals, communicating to audiences, recycling decisions,

energy use, biodiversity, packaging, food sourcing and merchandise, and much else besides. The application of sustainability principles is continually extending, generating valuable new knowledge that helps drive a sustainable cultural economy readying for change.

Midway through the programme, in late 2015, the Paris Agreement was adopted by almost 200 countries; in June 2017 the USA stated its intention to withdraw. While 195 countries remain committed to it, citizens and cities have pushed ahead of national governments to meet its targets – Leeds, Liverpool, London and Manchester are part of a major global city resilience movement organising and scaling together. Big science has become citizen action: *Blue Planet 2* gave voice to the outrage of plastic pollution, leading to business, government and manufacturers pledging to act; it is remarkable how quickly once ubiquitous plastic straws are disappearing. This shows how a cultural intervention with impeccable timing, a cool and trusted advocate, and a clear message can change everything.

But it isn’t enough.

Coming between the landmark Intergovernmental Panel on Climate Change (IPCC) Special Report on

³ <https://www.gov.uk/government/publications/creative-industries-sector-deal/creative-industries-sector-deal-html#fn:1>

⁴ <https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/finalesimates/2016>

Global Warming, launched on October 8th⁵, and the COP24 talks in Poland⁶, this report is a rallying cry for greater ambition. The IPCC assessment calls for direct action from governments and citizens, with just 12 years in which to stabilise global warming so that it does not exceed 1.5 degrees. Climate change and the environment are moral issues that require visible and tangible responses.

In uncertain times, arts and culture become even more important. As we experience climate change unfolding around us, arts and culture can intervene, disrupt, generate new knowledge and foster cultural practice that illuminates pathways through the complexities of climate and the environment. So much has been achieved in the last six years. As anthropologist Margaret Mead said in 1978 as she received her Planetary Citizen Award for her contribution to culture:

“Never doubt that a small group of thoughtful, committed citizens can change the world.”

The stakes are high. What will we achieve in the next four years?

Alison Tickell

Director, Julie’s Bicycle

⁵ https://www.ipcc.ch/pdf/session48/pr_181008_P48_spm_en.pdf – calls for renewed urgency and action on climate to keep global temperatures at 1.5 degrees Celsius warming (below the landmark Paris target of 2 degrees)

⁶ <https://unfccc.int/katowice>

“

It’s wonderful to see the collaboration between Julie’s Bicycle, the Arts Council and the creative sector succeeding in bringing together so many different cultural organisations to transform the public conversation on climate change, while tackling their own impact as well. Thank you for all your commitments so far and let’s keep blazing the trail, this work has never been more important.

”

Christiana Figueres

Founding Partner, *Global Optimism and*
Former Executive Secretary, UNFCCC 2010-2016

The Arts Council England Environmental Programme

Arts Council England’s 2012 policy intervention requires National Portfolio Organisations to annually monitor their environmental impacts using a carbon foot-printing tool developed by Julie’s Bicycle and to have an environmental policy and action plan. Organisations are supported with an ongoing programme of events, training, advice, resources and community-building provided by Julie’s Bicycle.

The 2017-18 programme has aimed to:

- help Arts Council England’s National Portfolio Organisations meet their funding requirements of impact measurement and action-planning
- encourage and champion the sector’s sustainable development
- deepen understanding of the sector’s environmental performance
- support the development of Arts Council England’s approach to environmental sustainability



Achievements

Energy efficiency and carbon reductions

23%

decrease in energy use between 2012/13 and 2017/18

35%

decrease in energy use emissions (based on electricity and gas) from 67,600 to 44,000 tonnes of CO₂ between 2012/13 and 2017/18⁷

7%

average annual reduction in energy use emissions (based on electricity and gas) since 2012/13

Increasing resilience

£16.5m

saved by the reporting portfolio since 2012/13 due to year-on-year reductions in energy use⁸

75%

of organisations find their environmental policy useful for supporting funding applications

Signs of a new creative ecology

1/4

of NPOs are now either on a green tariff or purchase their energy from a 100% renewable supplier

78%

of NPOs find their environmental policy useful for business planning

43%

of organisations find their policy useful for new partnerships and collaborations

Carbon literacy is creating wider benefits

65%

of organisations are producing creative work with an environmental theme

70%

of organisations feel the programme positively impacts staff wellbeing

⁷ This reduction is partly related to the UK's grid decarbonisation as fossil fuel energy generation is phased out and replaced with renewables.

⁸ Based on results from applying the 5% average annual reduction achieved by the core group on energy spend to the whole portfolio (based on 2012/13 electricity and gas of 469 organisations)

2017/18 Engagement

The arts and cultural sector is connecting with climate change and the environment through the programme.

87%

consider themselves **engaged or very engaged** in line with engagement since 2012/13

88%

agree environmental reporting has or can make a **positive difference** to the sector

77%

agree environmental reporting has or can make a **positive difference** to their organisations

58%

of organisations have been using their environmental data to **inform decision-making**

An average of

81%

of organisations use their environmental policy and action plans for **business-planning, funding applications and developing new partnerships**

An average of

71%

of organisations say action plans bring about recognisable **positive change**

“

Midlands Arts Centre has a strong commitment to environmental sustainability across the organisation. As well as practical initiatives, we recognise the important role that the arts has to play in increasing environmental awareness. MAC's Green Group continues to demonstrate that it is possible to have a relatively large impact with a little effort and imagination.

”

Lizzie Moran

*Head of Technical Resources,
Midlands Arts Centre*

Key findings

Methodology

The findings in this report were drawn from:

- Environmental reporting by National Portfolio Organisations on the Creative IG Tools
- An evaluation survey completed annually by NPOs and Major Partner Museums since 2012
- Case studies of best practice

For the methodology, analysis and sources, see Appendices

Energy efficiency and carbon reductions

Organisations' environmental data show us that energy use emissions have decreased by 35% since 2012/13 – an average annual reduction of 7%.⁹

The number of organisations reporting robust data can vary from year to year: therefore, for accurate analysis of longitudinal data in a changing portfolio, a cohort of 136 organisations (this 'core group' representative of the diversity of the sector at large) has provided strong and consistent data since 2012/13. The core group's energy use emissions represent 56% of the whole reporting portfolio's emissions. This group, with six years of consistent data, provides a reliable source of analysis from which we can infer longer-term trends and extrapolate findings and avoided costs.

Stories from the sector: carbon reduction

Pegasus Theatre (Oxford) has reduced its carbon emissions by 4.3 tonnes in 2018. Aside from optimising energy efficiency, the building management system monitors carbon dioxide levels, supplying fresh air and cooling with minimal use of refrigerant gasses. Lighting is controlled by motion sensors, and solar panels are installed on the south-facing roof. An environmental working group drives forward new initiatives and champions sustainability across the organisation.

Manchester Craft & Design has reduced its carbon emissions by 29% in 2017/18 compared to 2016/17, mainly due to reduced electricity consumption with support from the ERDF-funded Carbon Reduction programme (Green Business Growth Hub).

Since 2012/13, core group CO₂ emissions have **decreased by**

35%

(based on electricity and gas) **from 67,600 to 44,000 tonnes of CO₂** between 2012/13 and 2017/18

There has been an **average annual reduction in CO₂ emissions of**

7%

per year over six years

⁹ This reduction is partly related to the UK's grid decarbonisation as fossil fuel energy generation is phased out and replaced with renewables.



The arts and cultural sector has continued to focus on reducing energy use. From upgrading lighting to installing onsite renewable energy sources, small and large organisations across England are demonstrating how even the smallest contribution makes an impact. Efficient and responsible use of energy is building resilience and maximising resources.

Stories from the sector: energy efficiency

In 2017, **Turner Contemporary (Margate)** automatically shut down computers to reduce electricity at night, contributing to a 50% reduction in administration-specific energy use. Lighting-specific energy use has been reduced by 12%, keeping energy consumption under control despite an increase in opening hours during the summer.

The gallery is re-using exhibition furniture several times before it is recycled. Plinths and Perspex, which account for much exhibition 'waste', are re-used by local artists, schools and businesses. Turner's bespoke gallery modular wall system enables plasterboard to be added, removed and recycled, reducing consumption of materials.

Direct energy consumption in 2017/18
decreased by

23%

since 2012/13

There has been an **average reduction**
in energy use of

5%

per year over six years

Left: Turner Contemporary exterior. Photo by Hufton + Crow



Increasing resilience

The reporting portfolio's drive to reduce energy consumption has created savings of **£16.5 million** since 2012/13¹⁰ – 51 % of NPOs say they experience financial benefits as a result of their environmental initiatives, and over 70% of NPOs find their environmental policy useful for supporting funding.

Across the portfolio, those who are investing time and effort to better understand their environmental impacts, including simple good housekeeping measures like switching off lights and computers at night, are realising these financial benefits.

Engagement with the programme demonstrates to audiences that the arts and cultural sector is committed to climate action. This is beneficial for reputation, helping secure funding for further improvement and showing that the arts and cultural sector is engaging with the complex environmental challenges society is facing.

¹⁰ Based on results from applying the 5% average annual reduction achieved by the core group on energy spend to the whole portfolio (based on 2012/13 electricity and gas of 469 organisations)

Stories from the sector: financial resilience

Rural Arts North Yorkshire's sensor heating system and energy-efficient lighting, both installed as part of Arts Council England's Capital Fund, have improved efficiency and reduced costs by 5%. In addition, its solar panels produced a return of £495 in this financial year. The company regularly uses discarded materials such as textiles, cardboard and plastics in its creative workshop programme, uses locally sourced products and produce in its cafe, and has dramatically reduced its postage and paper usage. The gallery regularly features work made from a range of upcycled materials including glass, metal and textiles.

As a part of an upgrade project, **Wiltshire Music Centre Trust (Bradford on Avon)** is gradually replacing its building lights with LED lights, which, combined with the planned upgrade of its auditorium's lights, should enable it to reduce CO₂ emissions. This investment is at the heart of its 20th Anniversary Fundraising Appeal; to date it has gathered half of the funding required, including £12,000 in winnings from the M&S Energy Fund competition and Climate Friendly Bradford on Avon. The Trustees have agreed to underwrite the rest of the funding while fundraising efforts continue and the lights upgrade in the Auditorium was successfully completed in August 2018.

Half Moon Young People's Theatre (London) reduced its gas, electricity and water usage (gas by 7.5%, electricity by 4.5%, water by 28%) compared to 2016/17. In 2017/18 it received a grant of just over £3,000 to replace light fittings with more energy-efficient versions and specialist LED theatre lights.

£16.5m

of savings created since **2012/13**



Benefits beyond carbon

A wider understanding of climate change and environmental impacts is helping organisations link environmental practice with other organisational priorities.

The programme has strengthened literacy around reporting requirements, and also enabled many organisations to embrace environmental action as part of their culture, understanding the wide-ranging benefits of action. Organisations are including environmental sustainability in business strategies, stimulating new jobs, supporting the circular economy and increasing the use of sustainable technology and services in the sector. This shift is also seen in new collaborations and creative climate action: in 2017/18, 26% of the portfolio contributed to wider city or neighbourhood environmental policy and strategy.

Stories from the sector: creative responses

In 2017, **The Poetry Society (London)** ran four programmes about climate change and the environment with young writers aged 11 to 25, generating nearly 500 new poems. The programmes – I Am The Universe (in association with University of Leeds), Turn Up The Volume (with Oxfam), Namedropping (with People Need Nature) and Melting Ice (with National Maritime Museum) – involved publications, live workshops and performances in Harrogate, Leeds, London and York, reaching an audience of 11,000 people.

Modern Art Oxford's Future Knowledge exhibition combined artistic visual research with creative methods from design, ecology, biomimicry and systems thinking. Diverse perspectives and themes were explored through conversation, events and images, examining our attitudes to the past, present and future in a degrading environment, combining reflection and loss with inspirational solutions.

Creative responses:

65%

of organisations are producing (or planning to produce) work with an environmental theme.

Team morale and wellbeing:

70%

of organisations declare that involvement with the programme has led to an improvement in team morale and wellbeing.

Strategic decision-making:

78%

of NPOs find their environmental policy useful for business-planning.

People of Oxford!
What actions did you take last week
to contribute to a sustainable future?
Pick the badge(s) that say what you have done or what's on your mind.



“

It's the little things that make a difference; from paper Jiffy bags to reusable cups, it all helps staff feel they are doing their bit and this is then projected to audiences... plus, chipping away at little things does have an impact and staff feel good!

”

Julie Hewitt

Creative Arts East, Norfolk

Stories from the sector: place-making and community engagement

The **Middlesbrough Institute of Modern Art's** garden, with Gold Ecocampus accreditation, is a flourishing ecological project involving students and local people, and helping drive action on pollution, biodiversity, food production and recycling of materials.

Leicester's Phoenix Arts Centre has continued to connect audiences to environmental issues through their programme. In *The Eyes Of The Animal* (a VR installation showcased at its Spark Festival Digital Playground event) raised awareness of the biodiversity of UK woodlands, while the student film festival was programmed around the theme of wilderness. It also continues to grow its own kitchen produce in the garden and manages a volunteer scheme, Green Fingers.

Focal Point Gallery (Southend-on-Sea)'s programme *Maximum Overdrive*, in collaboration with Spiralseed, developed a vegetable garden in the gallery and public square in the summer of 2017. The garden was managed by Project 49, a group for adults with learning difficulties. The vegetables were harvested and cooked as part of Club Critical Theory's *Food Cultures* programme, which included discussions on food sustainability and the environment.

Reputation and risk management:

46%

of NPOs have experienced reputational benefits as a result of being part of the environmental programme.

Collaboration:

43%

of organisations, on average, find their policy useful for developing new partnerships and collaborations – this in turn can help improve their chances to influence the wider sector.

Right: Spark Festival 2017. City Playground. Photo by Pamela Raith





Stories from the sector: stakeholder engagement

Brewery Arts Centre (Kendal) hosted an exhibition by emerging artist Tilly Henry entitled *Plastic On The Menu*, highlighting issues around plastic in drinking water. The venue also programmed five film screenings with strong environmental themes, including *Human Flow* by Ai Weiwei and *A Plastic Ocean* by Craig Leeson. The Brewery used these as a forum for discussion, and groups involved included all the major political parties, South Lakes Action on Climate Change, Cumbria Action for Sustainability, the Landworkers' Alliance and Amnesty International.

University of Cambridge Museums are committed to using their collections to engage audiences with environmental issues. Projects include [Climate Hack](#), which challenged four teams of makers, artists, and environmental experts to design a prototype exhibit about climate change for four of their museums; and [Operation Survival](#), a collaboration with Fire Hazard Games, which engages participants with the environment through a high-energy competition across multiple museum sites.

HOME (Manchester) is committed to working on a zero-carbon culture road map and action plan, as part of the city's zero-carbon ambition. A joint collaboration with the Business Growth Hub helped to develop a sustainable procurement approach to all operational contracts. HOME has established a strong leadership position through partnerships with Transport for Greater Manchester and [Manchester Arts Sustainability Team](#), the Clean Air Day, the Walking Festival, Manchester Climate Change Conference, Carbon Literacy Project and [URBACT](#).

New creative ecology

Inevitably, action is changing the way the creative sector goes about its business. New priorities, practices, skills and investment are kick-starting a new creative ecology, which is generating jobs and driving demand for greener products and services. New skills, roles and knowledge are supporting clean technologies, sustainable goods and services, waste solutions and the emergent circular economy.

Organisations are demonstrating that everything is connected: activities to reduce electricity use engage audiences with environmental issues, improve staff wellbeing and foster collaboration to procure clean energy – in short, *everything* is driving a new creative ecology.

Many organisations are switching to clean energy providers or green tariffs, accelerating the transition towards a 100% renewable energy market. The number of organisations on green tariffs has increased throughout the programme, reducing emissions and driving the demand for clean energy in the UK.

A 20-fold increase in onsite renewable energy generation compared to 2012/13 – doubling since 2016/17 – is an exciting indication of a potentially very significant shift towards [clean energy](#).

Stories from the sector: circular economy

Glyndebourne Opera House (Lewes) reuses and recycles props, costumes and sets as much as possible. Costumes that are in good condition are sold to staff, other theatre companies or costume hire companies, while props are recycled through schemes like [Set Exchange](#). Recently, Glyndebourne began listing props of value on its website, investing the proceeds into their state-of-the-art Production Hub, opening in 2019. Environmental concerns have been carefully integrated ensuring the final building meets the [BREEAM excellent](#) standard for sustainability. This builds on Glyndebourne's wide-ranging efforts to reduce its environmental impacts – such as the wind turbine, which in six years has generated, on average, the equivalent of 102% of the company's annual electricity requirements.

43%

are now actively seeking out and purchasing or procuring products, materials and/or services with strong environmental credentials

1/4

of the portfolio are now either on a **green tariff** or purchase their energy from a **100% renewable supplier**



Stories from the sector: energy generation

Artsadmin (London)'s solar panels generated 8.51 MWh of electricity in 2017/18, saving 4.84 tonnes of CO₂. It received £1,084 for electricity provided to the National Grid in 2017/18. At 11.65p per kWh, the solar panels' generation represents a cost saving of approximately £992 per annum. Artsadmin's electricity and gas are from a renewable energy supplier.

Arts Services Grants (London) has received over £8,000 from the energy generated by its solar panels (approximately 10,000kW).

Stories from the sector: supply chain

Lyric Hammersmith (London) ran a four-week staff and audience campaign exploring ways to switch from single-use plastic supplies. On the last day of the campaign Lyric hosted one of the researchers for *Blue Planet 2*. The campaign resulted in:

- removing all single-use plastic bottles from sale in its bar
- removing all plastic straws and replacing them with paper alternatives
- selling reusable water bottles and eco-coffee cups to audiences, offering discounts on hot drinks to those who use them
- increasing the number of water fountains around the building
- switching energy and gas supply to Ecotricity

Contact Theatre (Manchester) switched to an electric-powered van: its low running costs enabled savings of nearly £4,000 and the theatre's green energy supplier means it is charged from renewable sources. Through its membership of the Fit for the Future Network, Contact has offered advice and support to other organisations considering electric vehicles.

“

The key shift is that, from now on, we have placed our work in the context of the UN Sustainable Development Goals. Following workshops on the policy, the staff – especially frontline staff in the bar and kitchen and production – have whole-heartedly engaged with this context and mission.

”

Lucy Davies

*Executive Producer,
Royal Court Theatre*



Key resources

Over the length of the programme, Julie's Bicycle has developed and produced a wide range of key resources.

4

factsheets: [renewable and green electricity factsheet](#)

2

[Creative Climate Census](#)

22

case studies

30

events with 1.4k delegates

11

guides: [Towards the Circular Economy](#), [Biofuels](#)

18

webinars with 600 attendees: [Green Touring](#), [Making Data Meaningful](#), [Museums' Environmental Framework](#)

Season for Change

Across the country, 198 organisations also signed up to [Season for Change](#), a programming invitation to celebrate the environment and highlight the urgency of action on climate change. This initiative, facilitated by Artsadmin and Julie's Bicycle, has generated 100 events in venues ranging from the Eden Project in Cornwall to Lakes Alive Festival in Cumbria, from carparks to Kew, allotments to Sadler's Wells. Leading cultural institutions including the Victoria and Albert Museum, Curzon Cinema Group and the National Theatre have thrown significant support behind the campaign, organising industry events and promoting their commitment. The increased momentum for programming on climate and the environment has demonstrated an inspiring range of creative content.

Creative Climate Leadership

In 2016, Julie's Bicycle launched the Creative Europe co-funded [Creative Climate Leadership](#) programme for artists and cultural professionals from across the world to explore the cultural dimensions of climate change and take action with impact, creativity and resilience. Participants include artists, cultural professionals, and representatives from organisations and funders across a wide range of creative disciplines from Australia, Belgium, China, France, Indonesia, Ireland, Montenegro, Netherlands, Slovenia, Spain, Taiwan, Turkey, the UK and Zimbabwe. Among the alumni of the programme's five-day intensive trainings in Wales and Slovenia are six Creative Climate Leaders from NPOs, as well as an Arts Council England employee. As part of Julie's Bicycle partnership with Arts Council England to support the 2018–2022 NPOs, two cohorts of ten organisations will, through the Accelerator Programme, receive the opportunity to take part in a three-day training initiative adapted from the Creative Climate Leadership programme in 2018 and 2020.

Looking ahead



“The sector’s ambition has been raised, and so has ours.”

As of April 2018, Arts Council England embarked on a new four-year contract with Julie’s Bicycle, considering how we can support organisations going even further to improve their environmental sustainability. Over the years we have seen carbon literacy and environmental action plans become the new normal for arts and cultural organisations, who are imbedding sustainability across all elements of their business. The sector’s ambition has been raised, and so has ours.

In May, we launched the [Accelerator Programme](#), which will see two cohorts of ten organisations or consortia work with Julie’s Bicycle to advance their sustainability practice. Julie’s Bicycle will help these organisations develop their ambitious ideas into deliverable projects, encouraging enterprise, innovation and creative perspectives on climate and the environment.

We also want to ensure our efforts are achieving the greatest possible impact. Data collated by

Right: Salisbury Arts Theatre

Julie’s Bicycle shows that a small proportion of organisations with large infrastructures generate over half of the portfolio’s total emissions. In response, we are rolling out a new dedicated scheme for these organisations – the [Spotlight Programme](#). On the programme, organisations will work with Julie’s Bicycle to set achievable, yet ambitious, Environmental Impact Reduction Objectives, resulting in a significant change to the sector’s carbon footprint.

These new programmes will complement the incredible achievements already being made by arts and cultural organisations, who have shown substantial enthusiasm and dedication over the past six years. The results of their hard work – as demonstrated by this report – highlight tangible benefits to the organisations, their audiences, the sector and to society. Looking ahead, we are excited to keep championing their efforts and are committed to helping the arts and cultural sector become leaders in environmental sustainability.

Francis Runacres

Executive Director, Enterprise & Innovation
Arts Council England



About Julie's Bicycle

Climate change is a consequence of a global economic system predicated on the over-exploitation of natural resources which doesn't account for – nor fully understand – the implications of large-scale environmental destruction. We need positive and inspirational action that respects the planetary systems upon which humanity relies, and which builds our sustainable future.

Julie's Bicycle, a London-based not-for-profit, is dedicated to encouraging, accelerating and amplifying the cultural response to climate change and environmental sustainability. We believe that the creative community is uniquely placed to imagine, create and communicate the changes that will transform our world. Culture will play an exponentially influential role in the climate change challenge.

We run a rich programme of events, free resources, consultancy, training, community-building and advocacy. We are deeply embedded within the creative and cultural community, working alongside organisations and artists across the UK and internationally to inspire creative responses and positive action.

juliesbicycle.com

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Appendix 1: Methodology

Greenhouse gas (GHG) emissions are a measure of climate change impact. Different activities release different GHGs, for example burning coal to generate electricity releases carbon dioxide (CO₂e), landfill waste releases methane. Each GHG has a different global warming potential, for example methane's is 20 times greater than CO₂e per unit of gas. 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, for example kg CO₂e per kilowatt hour (kWh) of electricity used, tonne of landfill waste or litre of petrol used. 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 methodology used to establish the carbon footprint and to identify trends in energy use, energy use emissions and energy costs over six years from 2012/13 to 2017/18, as well as that used to determine avoided costs, is outlined below.

Carbon footprint calculation

The carbon footprint was calculated by applying conversion factors of the year in question to energy, water, waste, travel, transport and materials data of the year in question. Annual conversion factors are published by the government. A total footprint was

calculated for each year, based on all sources of impact and data from all reporting organisations.

Energy

A more in-depth analysis was done of energy use, energy use emissions and energy costs and trends, as energy represents 93% of the total carbon footprint.

Energy use

Trends in energy use are based on absolute electricity and gas consumption (mains or grid supply) and onsite renewable energy in kWh.

Two sets of energy use calculations were done for each year:

- one for all reporting organisations, the number of which changes each year
- one for a core group of 136 organisations which reported each year since 2012/13

Energy costs

Energy costs are based on absolute electricity and gas consumption (mains or grid supply) in kWh, applying average energy tariffs of 11 pence per kWh of electricity and 3 pence per kWh gas. The cost of onsite renewable energy is not covered as costs depend on the technology used, but are mainly investment and maintenance costs and in many cases onsite renewables actually generate income through feed-in tariffs.

Two sets of energy costs calculations were done for each year: one for all reporting organisations and one for the core group of 136.

Energy use emissions

Energy use emissions are calculated by applying UK grid average electricity and gas conversions factors to absolute electricity and normalised gas consumption (in other words, absolute gas consumption figures have been adapted according to weather conditions) in kWh.

Two sets of energy costs calculations were done for each year: one for all reporting organisations and one for the core group of 136.

Avoided costs

Avoided costs were calculated for the core group of 136 organisations reporting each year since 2012/13. The starting point was their energy cost (mains electricity and gas) in the baseline year (in other words, 2012/13 and the average annual 4% reduction in energy use which this group has achieved). The avoided costs were calculated by comparing cumulative costs under a 'business as usual' scenario (in other words, 2012/13 energy costs remaining constant each year against cumulative costs where there has been an average annual 4% reduction each year from 2012/13). The results were extrapolated up to 2029/30.

Avoided costs were calculated for all reporting organisations. The starting point was the energy cost (mains electricity and gas) in the baseline year (in other words, 2012/13, based on the energy use of 469 reporting organisations). The avoided costs were calculated by comparing cumulative costs under a 'business as usual' scenario (in other words, 2012/13 energy costs remaining constant each year against cumulative costs where there has been an average annual 4% reduction each year from 2012/13). The results were extrapolated up to 2029/30.

Appendix 2: Data analysis

Total footprint

Table 1. Total footprint 2012/13-2017/18 – all impacts and reporting organisations

Source of impact	tonnes CO ₂ e					
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Electricity	74,168	74,858	79,595	63,882	65,290	51,819
Gas (normalised)	25,534	22,818	27,018	22,331	26,509	25,745
Oil and diesel	186	69	80	511	499	499
Water	774	775	730	557	686	686
Waste	1,243	1,279	1,706	2,558	2,843	2,843
Touring travel	242	664	707	581	496	496
Business travel	643	932	784	1,765	1,476	1,476
Materials	26	14	25	54	58	58
Total	102,815	101,409	110,645	92,239	97,858	83,622
Organisations	469	474	481	538	623	547
% change number organisations 12/13-17/18	17%					
2017/18 vs. 2012/13 change tonnes CO ₂	-19,193					
2017/18 vs. 2012/13 % change	-5%					
Year on year change tonnes CO ₂	-1,406	9,235	-18,406	5,619	-14,235	
Year on year % change tonnes CO ₂	-1%	9%	-17%	6%	-15%	
Annual average change %	-1%					

Table 2. Total footprint by activity 2012/13-2017/18 – all impacts and all reporting organisations

Activity	Source of impact	2012/13			2013/14			2014/15		
		Nr. orgs reporting	Individual reports	Tonnes CO ₂ e	Nr. orgs reporting	Individual reports	Tonnes CO ₂ e	Nr. orgs reporting	Individual reports	Tonnes CO ₂ e
Venues	Energy, water, waste and business travel	469	294	96,822	474	312	94,938	481	318	103,454
Offices	Energy, water, waste and business travel		234	5,498		234	5,597		238	6,036
Festivals	Energy, water, waste		19	227		23	196		22	423
Events	Energy and waste		0	-		0	0		0	1.54
Productions	Materials		26	26		17	14		22	25
Tours	Travel and transport		38	242		33	664		41	707
Total			611	102,815		619	101,409		641	110,647
				102,815			101,409			110,645

Activity	Source of impact	2015/16			2016/17			2017/18		
		Nr. orgs reporting	Individual reports	Tonnes CO ₂ e	Nr. orgs reporting	Individual reports	Tonnes CO ₂ e	Nr. orgs reporting	Individual reports	Tonnes CO ₂ e
Venues	Energy, water, waste and business travel	538	340	83,965	623	430	90,492	547	431	81,063
Offices	Energy, water, waste and business travel		337	6,957		369	6,766		356	6,383
Festivals	Energy, water, waste		25	678		14	46		13	2
Events	Energy and waste		11	2		0	-		0	-
Productions	Materials		35	54		14	58		4	1
Tours	Travel and transport		54	581		41	496		52	109
Total			802	92,237		868	97,858		856	87,558
				92,239			97,858			83,622

Energy use and energy costs

Table 3. Energy use 2012/13-2017/18 – all reporting organisations

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Electricity (kWh)	149,492,225	154,803,554	148,088,351	127,673,929	145,276,582	147,396,000
Gas (kWh)	183,582,875	165,100,880	146,844,383	122,224,153	148,775,993	148,297,000
Onsite renewables (kWh)	101,426	193,003	256,177	314,519	1,175,062	1,989,460
Total kWh	333,176,525	320,097,437	295,188,910	250,212,601	295,227,637	297,682,460
Number of organisations	469	474	481	538	623	547
kWh change year on year		-13,079,088	-24,908,527	-44,976,309	45,015,036	2,454,823
kWh change 12/13-17/18		-35,494,065				
% change 12/13-17/18		-11%				
% change 16/17-17/18		1%				
Average annual % change		-2%				

Table 4. Energy use 2012/13-2017/18 – core group¹¹

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Electricity (kWh)	101,627,646	100,023,491	98,204,500	93,824,503	93,128,140	84,486,264
Gas (kWh)	110,482,941	96,016,129	88,706,204	101,205,458	91,890,428	78,148,191
Onsite renewables (kWh)	143,101	202,048	169,723	177,824	167,782	386,339
Total kWh	212,253,688	196,241,668	187,080,427	195,207,785	185,186,350	163,020,795
Number of organisations	136	136	136	136	136	136
kWh change year on year		-16,012,020	-9,161,241	8,127,357	-10,021,435	-22,165,556
kWh change 12/13-17/18		-49,232,894				
% change 12/13-17/18		-23%				
% change 16/17-17/18		-12%				
Average annual % change		-5%				

¹¹ Tyneside Cinema was not able to provide energy data this year, so an assumption has been made based on last year's data

Table 5. Energy use emissions 2012/13-2017/18 – all reporting organisations

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Electricity tonnes CO ₂ e	74,168	74,858	79,595	63,882	65,290	51,819
Gas (normalised) tonnes CO ₂ e	25,534	22,818	27,018	22,331	26,509	25,745
Total tonnes CO₂e	99,701	97,676	106,613	86,213	91,799	77,564
Number of organisations	469	474	481	538	623	547
CO ₂ e change year on year		-2,025	8,936	-20,400	5,587	-14,235
CO ₂ e change 12/13-17/18		-22,137				
% change 12/13-17/18		-22%				
% change 16/17-17/18		-16%				
Average annual % change		-4%				

Table 6. Energy use emissions 2012/13-2017/18 – core group

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Electricity tonnes CO ₂ e	50,421	48,368	52,783	46,945	41,854	29,702
Gas (normalised) tonnes CO ₂ e	17,241	18,254	17,662	19,956	17,707	14,201
Total tonnes CO₂e	67,661	66,622	70,445	66,901	59,561	43,903
Number of organisations	136	136	136	136	136	136
CO ₂ e change year on year		-1,039	3,823	-3,544	-7,340	-15,657
CO ₂ e change 12/13-17/18		-23,758				
% change 12/13-17/18		-35%				
% change 16/17-17/18		-26%				
Average annual % change		-7%				

Table 7. Energy costs 2012/13-2017/18 – all reporting organisations

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Electricity £	£16,444,145	£17,028,391	£16,289,719	£14,044,132	£15,980,424	£16,213,560
Gas £	£5,507,486	£4,953,026	£4,405,331	£3,666,725	£4,463,280	£4,448,910
Total £	£21,951,631	£21,981,417	£20,695,050	£17,710,857	£20,443,704	£20,662,470
Number of organisations	469	474	481	538	623	547
£ change year on year		£29,786	-£1,286,367	-£2,984,193	£2,732,847	£218,766
£ change 12/13-17/18		-£1,289,161				
% change 12/13-17/18		-6%				
% change 16/17-17/18		1%				
Average annual % change		-1%				

Table 8. Energy costs 2012/13-2017/18 – core group

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Electricity £	£11,179,041	£11,002,584	£10,802,495	£10,320,695	£10,244,095	£9,293,489
Gas £	£3,314,488	£2,880,484	£2,661,186	£3,036,164	£2,756,713	£2,344,446
Total £	£14,493,529	£13,883,068	£13,463,681	£13,356,859	£13,000,808	£11,637,935
Number of organisations	136	136	136	136	136	136
£ change year on year		-£610,461	-£419,387	-£106,822	-£356,051	-£1,362,873
£ change 12/13-17/18		-£2,855,595				
% change 12/13-17/18		-20%				
% change 16/17-17/18		-10%				
Average annual % change		-4%				

Table 9. Avoided costs – core group

	Business as Usual costs with 2012/13 baseline	Costs based on 5% year-on-year savings from 2012/13 baseline	BAU vs. 5%
2012/13	£14,493,529	£14,493,529	£0
2013/14	£14,493,529	£13,768,853	£724,676
2014/15	£14,493,529	£13,044,176	£1,449,353
2015/16	£14,493,529	£12,319,499	£2,174,029
2016/17	£14,493,529	£11,594,823	£2,898,706
2017/18	£14,493,529	£10,870,147	£3,623,382
2018/19	£14,493,529	£10,145,470	£4,348,059
2019/20	£14,493,529	£9,420,794	£5,072,735
2020/21	£14,493,529	£8,696,118	£5,797,412
2021/22	£14,493,529	£7,971,441	£6,522,088
2022/23	£14,493,529	£7,246,765	£7,246,765
2023/24	£14,493,529	£6,522,088	£7,971,441
2024/25	£14,493,529	£5,797,412	£8,696,118
2025/26	£14,493,529	£5,072,735	£9,420,794
2026/27	£14,493,529	£4,348,059	£10,145,471
2027/28	£14,493,529	£3,623,382	£10,870,147
2028/29	£14,493,529	£2,898,706	£11,594,823
2029/30	£14,493,529	£2,174,029	£12,319,500
	£260,883,527	£150,008,028	
Avoided costs 12/13-17/18		£10,870,147	
Avoided costs 12/13-24/25		£56,524,764	
Avoided costs 12/13-29/30		£110,875,499	

Table 10. Avoided costs – all reporting organisations

	Business as Usual costs with 2012/13 baseline	Costs based on 5% year-on-year savings from 2012/13 baseline	BAU vs. 5%
2012/13	£21,951,631	£21,951,631	£0
2013/14	£21,951,631	£20,854,049	£1,097,582
2014/15	£21,951,631	£19,756,468	£2,195,163
2015/16	£21,951,631	£18,658,886	£3,292,745
2016/17	£21,951,631	£17,561,305	£4,390,326
2017/18	£21,951,631	£16,463,723	£5,487,908
2018/19	£21,951,631	£15,366,142	£6,585,489
2019/20	£21,951,631	£14,268,560	£7,683,071
2020/21	£21,951,631	£13,170,979	£8,780,652
2021/22	£21,951,631	£12,073,397	£9,878,234
2022/23	£21,951,631	£10,975,815	£10,975,815
2023/24	£21,951,631	£9,878,234	£12,073,397
2024/25	£21,951,631	£8,780,652	£13,170,979
2025/26	£21,951,631	£7,683,071	£14,268,560
2026/27	£21,951,631	£6,585,489	£15,366,142
2027/28	£21,951,631	£5,487,908	£16,463,723
2028/29	£21,951,631	£4,390,326	£17,561,305
2029/30	£21,951,631	£3,292,745	£18,658,886
	£395,129,358	£227,199,381	
Avoided costs 12/13-17/18		£16,463,723	
Avoided costs 12/13-24/25		£85,611,361	
Avoided costs 12/13-29/30		£167,929,977	

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Above: Passage for Par by Rosemary Lee, commissioned by CAST for Groundwork, a season of international art in Cornwall, summer 2018. © Graham Gaunt

