



## 21 Green Dance By Julie's Bicycle

**JULIE'S BICYCLE** \* \*\* \*  
SUSTAINING CREATIVITY

### Top tips for an environmentally sustainable dance sector

The biggest challenge we face as a global community today is the transition to a more environmentally sustainable existence. As the effects of climate change and associated concerns of resource scarcity, growing populations and ecosystem degradation become more tangible, we must all find ways to respond.

The arts hold the power to connect with, animate and motivate people. Arts organisations and artists hold huge potential to galvanise change; by reducing your environmental impacts and communicating your actions, you can encourage your supply chain and audiences to do the same.

All dance practitioners – dancers, choreographers, designers, production companies, rehearsal space and venue managers, tour managers and administrators – have their part to play in making dance more environmentally sustainable. In doing so, you join a whole community of arts organisations developing imaginative new ways of working that will not only reduce environmental impacts, but build resilience and ensure that we'll be creating world-leading dance for many years to come.

#### WHY CHANGE?

A commitment to change can unlock new business models, opportunities, and ways of doing things both operationally and artistically. Going green doesn't have to be just a box-ticking exercise – it's an opportunity to re-think and future-proof your work. Here are some of the drivers influencing this shift.

### Resource scarcity and commodity pricing

Energy prices in the UK have rocketed over the last few years and as fossil fuels become increasingly scarce we can only expect costs to keep rising. The cost of many other natural materials, such as metals, timber, textiles and petroleum-based manmade products are also on the increase as our consumption patterns and inefficient waste systems push the planet to its limits.

### Policy and regulation

The Climate Change Act 2008 sets a legally binding target for the UK to reduce its carbon emissions by 80% by 2050. Subsequently, Arts Council England has made environmental reporting a funding criteria for their major revenue funded organisations. This means that dance organisations across England are measuring their annual energy and water use and implementing an environmental policy and action plan.

### Reputation

Audiences are increasingly conscientious of the environment, and artists and arts organisations can provide leadership and galvanise positive action by visibly acting to reduce their impacts. A survey by Buckinghamshire New University and A Greener Festival in 2012 found that 43% of festival-goers who responded said that they'd changed their behaviour as a result of a green initiative they had encountered at a festival. Arts organisations acting on climate change can build a more positive brand with audiences who want the culture they consume to reflect their personal values.

### The business case

Many arts organisations are recognising that not incorporating the above drivers into their business planning will increase the risk of financial instability in the near future. They are also reaping the benefits of efficiency savings. By reducing energy, waste, water and travel impacts through behaviour change and smart investment in low-energy infrastructure, dance organisations are able to invest more in making work.

#### TAKING ACTION: STARTING POINTS

Here are some general guidelines to help you effectively reduce your impacts, followed by more specific actions for green offices, venues and rehearsal spaces, green production and green touring.

### Measurement and Understanding

Measuring the carbon emissions associated with your activities is a great way to determine where your largest impacts lie and develop a targeted approach to reducing them. It also allows you to compare progress across time or events to identify reductions.

**IG Tools** Online carbon calculators developed for venues, offices, festivals, tours and productions: [www.juliesbicycle.com/industry-green/ig-tools](http://www.juliesbicycle.com/industry-green/ig-tools)

### Commitment

Environmental sustainability initiatives are most successful when supported by all staff, from top-level management down. An environmental policy helps you codify your commitments and communicate them to staff and other stakeholders, and an accompanying action plan helps set targets and methods for evaluation.

## Environmental Policy and Action Plan

**Guidelines** A template for creating your own environmental policy and action plan: [www.juliesbicycle.com/resources/environmental-policy-guidelines](http://www.juliesbicycle.com/resources/environmental-policy-guidelines)

## Communication

By being transparent about your environmental impacts and what you're doing to reduce them, you communicate to staff, artists, audiences and stakeholders that the environment is a priority. This adds integrity to your work, and encourages others to think about their own environmental impacts.

### Communications Practical Guides

Top tips for how to communicate sustainability effectively to staff, audiences and suppliers: [www.juliesbicycle.com/resources/practical-guides](http://www.juliesbicycle.com/resources/practical-guides)

### Staff engagement

In October 2011, Circus Space launched an Energy Awareness Week, using playful initiatives to engage staff with the organisation's commitment to reduce energy use and improve its environmental impacts. The building manager monitored energy use during the week and the three-month period following, and compared to the same period in 2010, they saved 10% on their energy. Full case study: [www.vimeo.com/39835309](http://www.vimeo.com/39835309)

### Tracking change

Bow Arts have been keeping a blog on their journey towards becoming a greener organisation – their initiatives to date have included staff green weeks, monitoring their environmental impacts using the IG Tools, and improving waste recycling at their Open events: [www.bowarts.tumblr.com](http://www.bowarts.tumblr.com)

## Green Offices, Venues and Rehearsal Spaces

These top tips are adapted from the 'Green Your Building Guide' available online at: [www.juliesbicycle.com/resources/practical-guides/green-your-building](http://www.juliesbicycle.com/resources/practical-guides/green-your-building)

### 1. Switch off, save energy

Introduce a switch-off routine for all lights and equipment and engage your staff in a campaign to avoid wasting electricity by leaving things on when not in use. Unplug equipment and

appliances from the wall when not in use (otherwise they can still draw energy).

### 2. Avoid disposable bottled water

It takes seven litres of water just to produce a one litre plastic bottle and only 20% of plastic bottles produced end up being recycled. To reduce this waste, use refillable water bottles instead of bottled water. Easy access to tap water or bulk water dispensers should be provided in offices and rehearsal areas.

### 3. Maintain efficient heating, cooling and ventilation systems

Set your thermostat at 18 degrees for optimum energy saving, or for buildings controlled by a Building Management System (BMS), relax your optimum temperature boundaries to between 18 and 24 degrees, accounting for dancer health in rehearsal and performance spaces by setting tighter boundaries if necessary. Service your boiler annually and check your boiler's efficiency at [www.boilers.org.uk](http://www.boilers.org.uk).

### 4. Support renewable energy

Change to a green energy tariff from your electricity supplier, or better still, choose a 100% renewable energy supplier like Good Energy or Ecotricity.

### 5. Green your supply chain

Choose suppliers, services and products that have strong environmental credentials to reduce your indirect impacts and drive demand for sustainable goods and services. Look for ISO 14001 accredited suppliers and ask to see their environmental policy.

### Green Suppliers Database

A listing of environmentally conscious suppliers already working with the creative sector: [www.juliesbicycle.com/resources/jb-green-database/suppliers](http://www.juliesbicycle.com/resources/jb-green-database/suppliers)

### 6. Better business travel

Use video conferencing for meetings where possible and avoid domestic flights. Use train travel within the UK and Europe where possible. If you need to use a taxi service, choose one that runs on hybrid cars.

### 7. Reduce paper use

Print double sided on recycled and/or FSC certified paper. Use non-toxic and

biodegradable ink and recycle ink cartridges. Explore electronic marketing where possible.

### 8. Recycle

Work with a waste contractor that offers a zero waste to landfill service so that everything you throw away, including food and electric items, is recycled or turned into fuel. Make recycling easy by providing clearly marked recycling bins for all staff and front of house areas.

### 9. Communicate

Effective internal communication with staff gives everyone in your organisation ownership over the issue. Circulate your environmental policy and action plan and use fun initiatives to raise awareness. Also include freelance contractors, suppliers and other dancers or companies you work with – they contribute to your impacts and often have great ideas on how to reduce them.

### Sadler's Wells:

#### Towards a more sustainable venue

Sadler's Wells has regularly commissioned energy audits of the building, and has reduced electricity and gas consumption by 20% and 70% respectively since 2006. They now recycle 80% of all waste and in 2011/2012 achieved a 37% reduction in their mains water consumption. In recent years, they have renovated the building extensively, including improving insulation and installing lower wattage lights in dressing rooms and backstage areas. Their efforts have reduced both environmental impacts and utility bills, the savings from which can be re-invested in their artistic projects.

In 2013-14, further reductions in their energy consumption will be achieved by replacing auditorium and foyer lighting with dimmable low energy LED units, replacing architectural auditorium lighting with LED units and investing in new energy efficient production lighting stock and dimmers.

Through initiatives such as the Future Light event in March 2013, instigated by Sadler's Wells and organised with White Light Ltd., Sadler's Wells is actively involved in driving forward good practice and contributing to discussions around sustainable futures for dance at all levels – from manufacturers to grassroots.

## Green Production

'Sustainable' or 'green' production refers to an approach that considers environmental impacts equally alongside artistic and financial concerns in the production process. The environmental impacts of production include the carbon emissions of energy use, waste produced, travel and production transport, and the materials for set, prop and costume construction, as well as the social implications of how and where key resources used in production are sourced from. For example, fabric taken from non-organic sources has an impact on human health and biodiversity through the toxic fertilisers used to treat the crop.

These top tips are adapted from the Julie's Bicycle Sustainable Production Guide: [www.juliesbicycle.com/resources/practical-guides/production](http://www.juliesbicycle.com/resources/practical-guides/production)

### 1. Engage everyone involved

Artistic directors and choreographers should collaborate with production managers, technicians and lighting, sound, set and costume designers from the outset to design an aesthetic that has a low environmental impact. Recognise that this does not mean compromising artistic vision and consider developing a green production policy to aid communication.

### Sydney Theatre Company Green Production Policy

An example of a green production policy currently in use: [www.greeningthewharf.com/wp-content/uploads/2011/12/STC-Green-Design-Policy-FINAL-2012.pdf](http://www.greeningthewharf.com/wp-content/uploads/2011/12/STC-Green-Design-Policy-FINAL-2012.pdf)

### 2. Reduce, Reuse, Repurpose, Recycle

Find ways to re-use, donate, re-purpose or recycle set, props, costumes and production materials. Construct sets so that different constituent parts can be dismantled and recycled properly.

### 3. Be energy efficient

Conduct rehearsals under working lights where possible. Switch off show lighting after the rig check until half an hour before the performance – organisations like the National Theatre have been doing this for years without any issues. Switch off any other equipment when not in use.

### 4. Design energy efficient lighting rigs

Use technologies with low wattage and design the show to be lit using the least amount of power possible. Keep up-to-date with the latest developments in low energy lighting.

**White Light Green Guide** A guide developed by entertainment lighting specialists White Light. [www.whitelight.ltd.uk/greenguide](http://www.whitelight.ltd.uk/greenguide)

### 5. Use and experiment with sustainable materials

Consider the impacts of different materials and be resourceful. Try to use as many reclaimed and recycled materials as possible, and make sure new products are environmentally responsible, for example timber that is FSC certified to show it has come from sustainably managed stock.

### Mo'olelo Green Theatre Choices Toolkit

A series of scorecards showing the sustainability of commonly used production materials, and their greener alternatives: [www.moolelo.net/green](http://www.moolelo.net/green)

### 6. Use rechargeable batteries

Rechargeable batteries are 32 times less harmful to the environment than disposables. Use rechargeables for portable equipment and always recycle batteries after use. For more information see [www.betterbatteries.info](http://www.betterbatteries.info)

### 7. Recycle set materials after the show

Make sure all set, props and costumes are recycled after the show. Use a production waste service that recycles materials rather than sending waste to landfill, for example [www.scenerysalvage.com](http://www.scenerysalvage.com) and [www.set-exchange.co.uk](http://www.set-exchange.co.uk)

### 8. Communicate your impacts and initiatives

Communicate with your audiences – both because audience travel makes up a significant proportion of any arts activity (so you really want to encourage them to travel green) and because it can amplify the reach of your actions by encouraging others to do the same.

### One step at a time

Freelance production manager, Chris Swain, has been greening the production and touring practices of the dance companies he's worked with for several years, such as Bonachela Dance

Company and The Mark Bruce Company. He tries to implement at least one new initiative on each tour he works on, and this has included using low energy fluorescent, MBI and LED lighting systems, using rechargeable batteries for practicals and radio mics, a waste vegetable oil (WVO) bio-diesel van for touring, re-using, selling or donating set items after tours finish, using the Julie's Bicycle Green Rider and monitoring the carbon footprint of several tours using the IG Tools.

### A glimpse of the future

Presenting a futuristic vision of what 'sustainable dance' might mean, choreographer Prue Lang has been collaborating with the MIT Media Lab to push technological and artistic development. *Un réseau translucide* (sustainable dance performance) (2008) generated 100% of its own energy through custom-constructed costumes and scenography, and her present *Timeproject* (2013) builds on this concept.

**The Prue Lang Company** has a comprehensive environmental policy aiming to reduce the environmental impacts of their performances and touring activity, available at [www.pruelang.com](http://www.pruelang.com).

## Green Touring

These top tips are adapted from our Green Mobility Guide: [www.juliesbicycle.com/resources/green-guides/green-mobility-guide](http://www.juliesbicycle.com/resources/green-guides/green-mobility-guide)

**1. Optimise your tour itinerary to minimise travel distances and avoid one-off performances.** If scheduling festival appearances, try to find other opportunities in the same geographic region. Smarter routing also has a positive impact on your budget and dancers' health.

### 2. Use a green rider or include sustainability clauses in contracts.

This can be as simple as requesting recycling facilities backstage, or that food is locally sourced and seasonal. Ask to see the environmental policy and action plans of venues and events.

### Green Rider Template

A template of potential environmental requests to share: [www.juliesbicycle.com/resources/jb-green-riders](http://www.juliesbicycle.com/resources/jb-green-riders)

**3. Reduce production transport as much as possible.** Try to source equipment and set locally, and design set to pack down into the smallest space possible.

**4. Choose low emission transport.** Use rail and ground transport for crew and equipment within Europe to avoid airfreight. Choose logistics companies with fuel-efficient vehicles such as the Euro 5 engine, and drivers with eco-driving training, or explore vehicles powered by waste vegetable oil (WVO) biofuel. Reduce long haul freight emissions by approximately 25 times by using shipping rather than airfreight.

**5. Book or request hotels with environmental credentials that are as close to the venue as possible.** Hotels can make up over 50% of the direct emissions associated with a tour due to their high energy consumption. Using rented accommodation and services such as [www.airbandb.com](http://www.airbandb.com) or staying with friends can significantly reduce your impacts.

**6. Encourage your audiences to use public transport, cycle or car-share.** Audience travel is one of the largest indirect generators of emissions associated with the arts, so make sure you circulate information on how to get to each venue in the 'greenest' way possible.

#### **Rambert Dance Company**

Rambert measure the emissions of their touring activity, which has led to an improved understanding of their overall impacts. In their first year of measurement, they had no overseas tours – and yet 35% of the company's impacts came from travel, in the form of one return trip to Australia! During the autumn 2012 season, Rambert Dance Company toured in Asia, covering Shanghai, Hong Kong and Seoul. To reduce the amount of production equipment for transport, they decided to leave their 10-ton touring lighting rig at home, instead relying on local set-ups. The remaining costumes, props, scenery, dance floor and front end lighting control system were transported in a 20-foot sea container – avoiding the larger emissions associated with air freight.

Rambert has also been auditing the environmental impacts of their studio space since 2011. In 2013 they will move to a new studio with thicker walls, improved insulation and better air tightness, promising a reduction in carbon emissions of around 25%. The building's sustainable infrastructure includes solar hot water collectors (SHWC), which capture the sun's heat to provide hot water, and air source heat pumps (ASHP) which absorb heat from the air and are capable of both heating and cooling, removing the need for additional heating, cooling and ventilation infrastructure. These will further reduce the energy use of the building. Rambert also has a commitment to achieve at least a 10% CO2 saving by using renewable energy sources.

#### **About Julie's Bicycle**

Julie's Bicycle aims to make environmental sustainability intrinsic to the business, art and ethics of the creative industries. We are now working with over 1,000 organisations in the UK and internationally.

**You can find additional resources at [www.juliesbicycle.com](http://www.juliesbicycle.com)**

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