Bristol green event guides

outdoor events & festivals

In it for good

BRISTOL 2015 EUROPEAN GREEN CAPITAL

BRISTOL winner 2015 EUROPEAN GREEN CAPITAL

An initiative of the European Commission

Contents

1 Introduction

As part of Bristol European Green Capital 2015, a citywide sustainable event strategy has been developed to support festivals and events; helping them to manage their operations with reduced environmental impact and helping the city to become more sustainable.

All events have an ecological footprint; requiring travel, consuming energy, water, food and materials, and producing waste and carbon emissions. These impacts can be addressed through measures such as green travel initiatives, recycling systems, managing energy and water more efficiently and choosing sustainable suppliers. Making your event more environmentally sustainable is achievable, and in many cases, may improve the audience experience and reduce costs.

This guide provides advice on how to approach your event more sustainably, and outlines the simple steps you can take to reduce the impacts of each aspect of your operation.

The word 'sustainability' can mean a variety of different things to different people and organisations. One famous definition[1] coined in the late eighties described sustainable development as:

"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

This means that for our actions to be sustainable, we need to consider a wide range of political, social, environmental and economic factors and the impacts they may have on the people of the future. Importantly, the word 'needs' is often interpreted in different ways to make arguments for taking action or doing nothing!

This toolkit is about taking positive action to help reduce the environmental impact of your event. This means that for the rest of the document, when we talk about sustainability, we mean 'environmental sustainability'. This doesn't mean that we're not considering the economics, political and social impacts, we're just focussing on environmental issues; this is for the Green Capital after all.

To further simplify our aims, we're going to focus on the issue which will negatively impact upon future generations the most; the Greenhouse Effect. This is measured in terms of 'Carbon Dioxide Equivalent' (CO2e) which is the universal unit of measurement used to indicate the global warming potential (GWP) of each of the 6 Kyoto greenhouse gases. It is used to consistently evaluate the future impacts of releasing (or avoiding the release of) different greenhouse gases. This guide does not consider immediate environmental impacts such as disturbing local wildlife or spillages of pollutants on the ground, as these impacts are covered under existing regulation and legislation, and should already be part of established working practices.

FACT: The Stern Review (2007)[2] conservatively estimated that it will cost future generations £52 for every tonne of CO2e emitted by humans today. At the current rate of annual production (nine billion tonnes), that's half a trillion pounds per year!

[1] World Commission on Environment and Development (WCED) 1987, Our Common Future (aka The Brundtland Report), Oxford University Press, Oxford.
[2] Stern, N. (2007) Stern Review: The Economics of Climate Change, Cambridge University Press, Cambridge.

2 Understanding impacts

Understanding the impacts of events, and your event specifically, will help you make informed decisions when considering your options and priorities for making changes.

For most outdoor events held in temporary venues, such as parks, everything required is delivered to site by motor vehicles and if temporary power is required then this requires fuel; both these activities result in carbon emissions. Everything used to build an event, from construction wood to printed banners, is made from materials sourced from somewhere; manufactured and moved to where they are needed and causing impacts all along the supply chain. Goods that are made from re-used or recycled materials generally have a lower environmental impact than those made from primary raw materials. There are impacts from the food and drink consumed at the event, and the materials used to serve it. The way we manage waste is also a significant consideration. Each of these activities contributes to overall greenhouse gas emissions, contributing to global warming and climate change and depleting our world's finite resources.

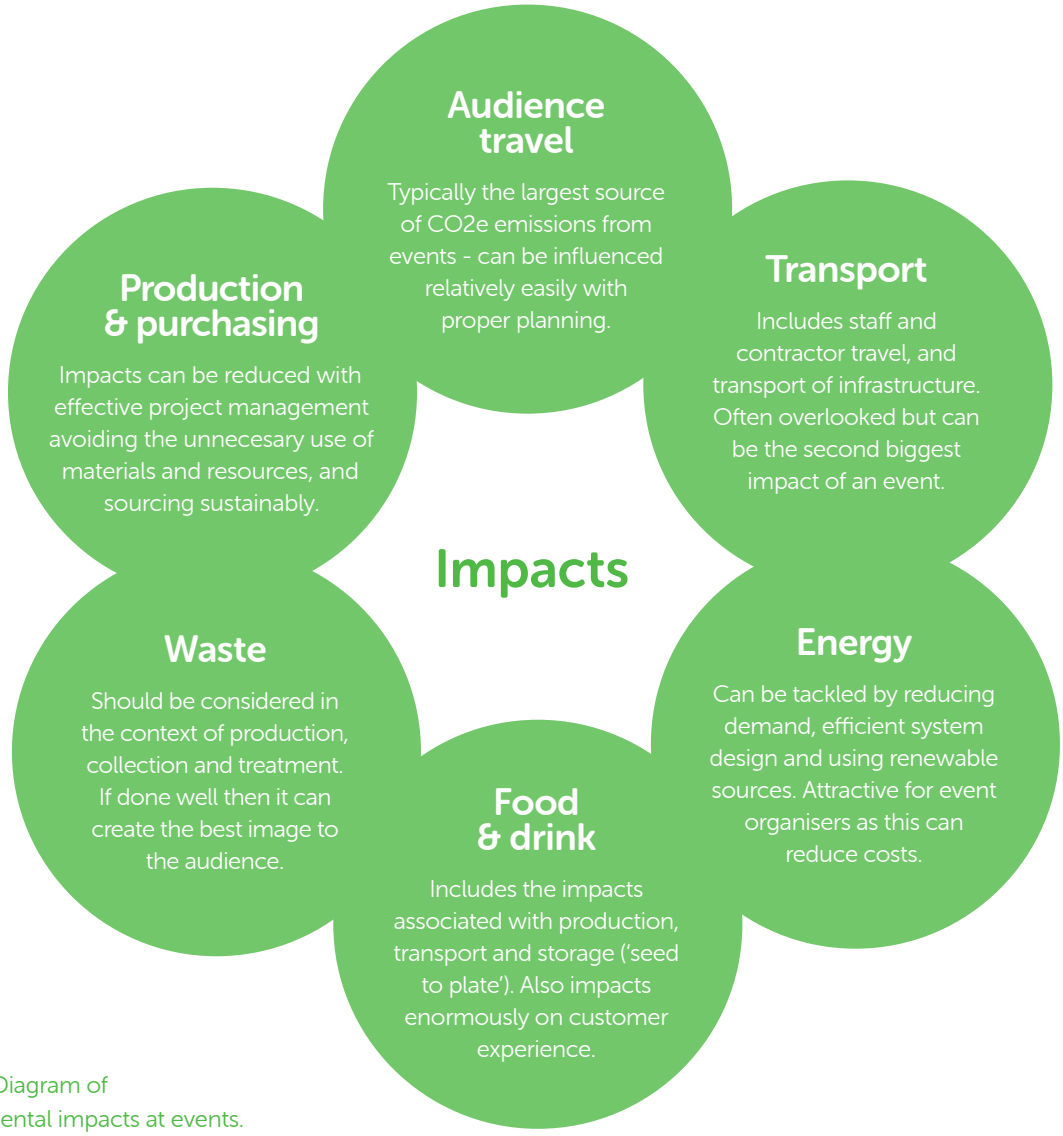


Figure 1: Diagram of environmental impacts at events.

To reduce the impact of an event, all these aspects should be considered in terms of the type of product(s) and services being used, their amounts, and how they are disposed of. For example, there may be an opportunity to reduce fuel consumption and costs by managing the power supply more efficiently; products can be sourced through certified schemes, such as Forest Stewardship Certification (FSC), and/or from local sources which reduces travel miles. Materials/containers used to serve food could also be made from materials which are compostable or recyclable to avoid waste going to landfill.

Typically, audience travel is the most significant contributor to an event's carbon emissions, but staff and contractor travel can also be significant. When we consider an event's 'operational impacts' (i.e. everything other than the audience travel), the most significant environmental burdens result from staff and contractor transport, generating power, resources and materials used (including food and drink), and the way waste is managed.

Although it may feel daunting to make a fundamental change in your organisation, there are many small but worthwhile steps you can take to begin the journey of greening your event in the first year. This guide provides practical advice, tips and case studies to help you to choose which steps to take, and links to further reading and resources to explore issues and opportunities in more depth.

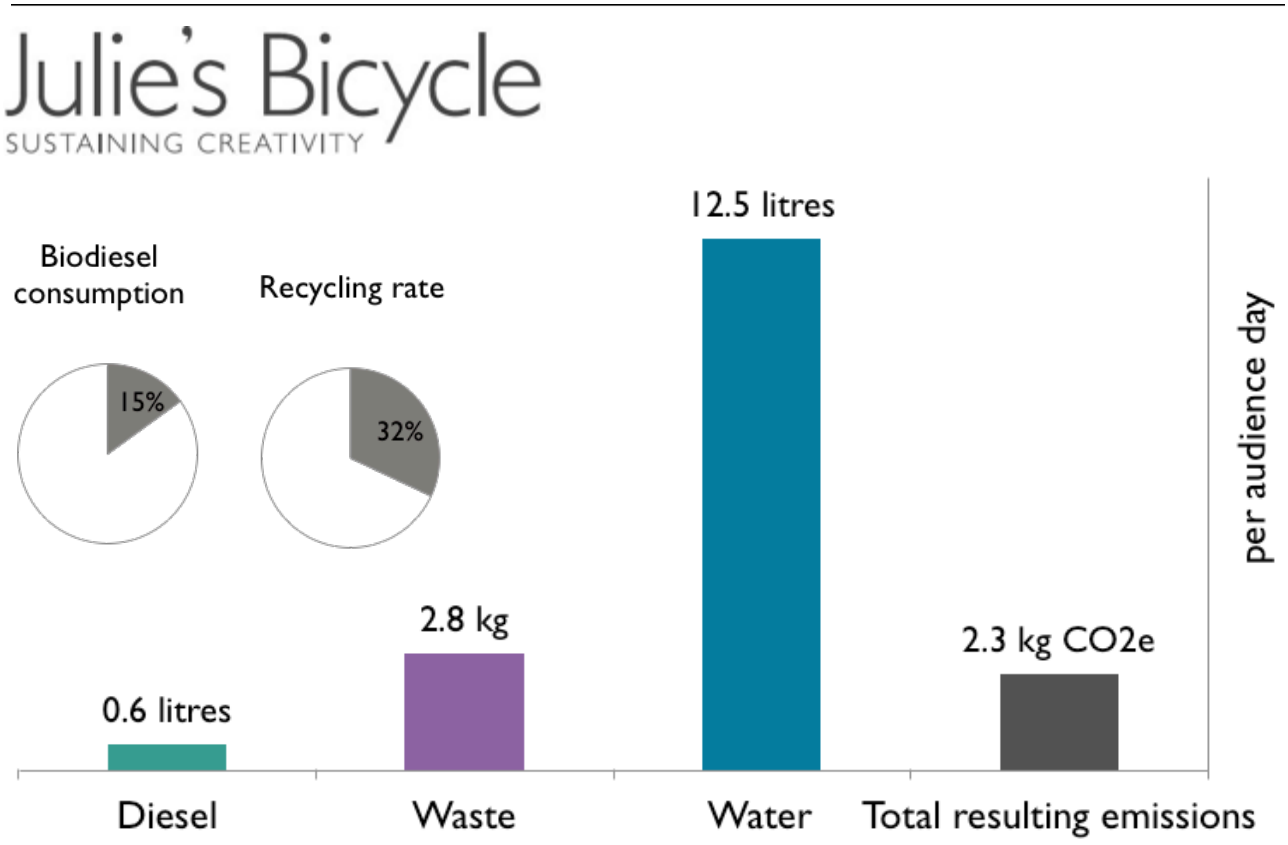


Figure 2: UK Festival Benchmarks 2013 (Julies Bicycle).

Quick links

- **Julie's Bicycle benchmarks:** www.juliesbicycle.com/resources/benchmarks

3.1 Environmental policy

An environmental policy should be a broad statement of an organisation's overall environmental ambitions, providing the foundations for how sustainability is integrated into the way an event is managed.

There is no specific way to write a policy, but it should be specific to your organisation, its mission statement and its activities. It is useful to have an understanding of the impacts of your event before you start, so that the policy represents real understanding of opportunities to reduce them. It is usually a short document of one or two pages; Figure 3 outlines some of the things to include.

Figure 3: Steps to making an environmental policy.

Tips

- Involve as many people in your organisation as possible and any other significant stakeholders in the development of your new policy (or revisions). This will highlight opportunities, engage people who it may affect, and help the likelihood of successful integration into working practice.
- Ensure that the final policy is signed off at a senior level.

Quick links

- **Environmental Policy and Action Plan Guidelines, Julies Bicycle:** http://www.juliesbicycle.com/resources/environmental-policy-guidelines

3.2 Green action plan

specific event; detailing how you expect to achieve them. As events vary considerably due to type, size, audience profile and location, it should be done on an event-by-event basis, although companies organising multiple events may choose to have a template to adapt for each event. Figure 4 summarises the main things to put in your action plan.

Figure 4: Summary of contents for a green action plan.

Tips

- Start with achievable targets.
- Aim to tackle your largest impacts, even if in the first year the targets are modest.
- Consider how you will communicate the targets to everyone who is required to be involved, and everyone it may affect.
- Where possible use specific targets, as this helps to judge success.

Quick links

- **Free Green Action Plan template available at:** www.kambe-events.co.uk/resources

This section of the guide outlines some of the practical steps you can take to reduce environmental impacts in each area of your event's management. Whilst for many, the ultimate goal is a reduction in greenhouse gases attributable to the event, each activity within your event represents specific impacts and challenges within this overarching goal.

4.1 Audience travel and transport

At most events, travel is the largest source of carbon emissions; with audience travel typically accounting for over 70%[3]. Staff travel and contractor transport (i.e. deliveries and collections) are also significant, but less industry data is available to quantify these impacts, and they can be more difficult to measure.

An average of 65% of attendees travel by car[4] to the UK's summer festivals, but for city centre events there is often a majority who travel by public transport, bicycle or on foot. The relative impacts of different travel choices can be seen in Figure 5 below.

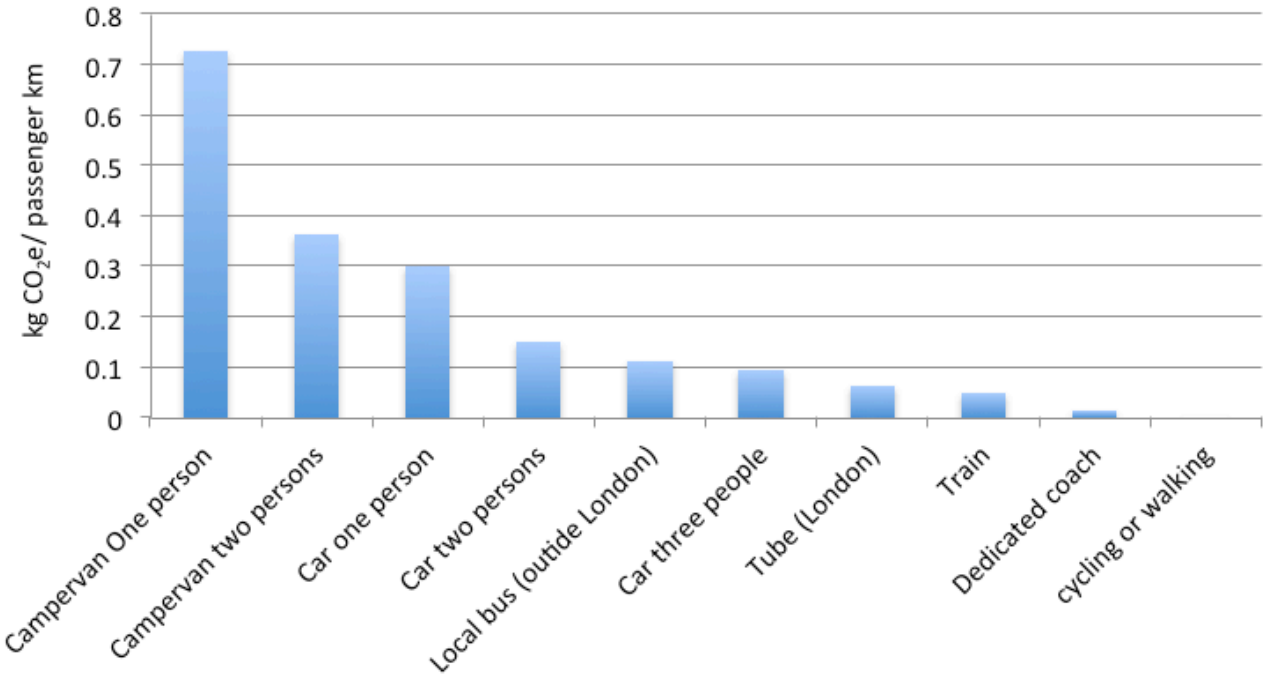


Figure 5: Relative (equivalent) CO2 emissions for different transport types (Source: DEFRA Company Reporting Guidelines 2014)

[3] Powerful Thinking (2015), The Show Must Go On Report.
[4] Julies Bicycle (2014), Industry Green Tool benchmark, London. Available at: www.juliesbicycle.com/resources/benchmarks

Events can often influence rather than dictate how audience members choose to travel. This is often easier for fenced rural events than unfenced free-to-access city centre events because organisers can control the parking in rural areas. Larger events are expected to have a Traffic Management Plan in place as part of their license approval, which usually includes travel options for the audience. Alongside this, some events will have a dedicated Sustainable Travel Plan, which outlines how people will be encouraged to travel by public transport, bicycle or on foot.

What are we aiming for?

- High or increased car occupancy.
- More people using public transport – buses, trains or coaches.
- Provision of dedicated coach services or shuttle buses from local transport links where required.
- More people walking and cycling.
- Reduced production and infrastructure transport – fewer and shorter contractor delivery and collection journeys.

Measures you can take:

If sustainable travel options are fully considered during planning, and clearly communicated to event-goers pre-show, then this will increase the chance of the most sustainable travel option being used. Consider taking the following action:

- Communicate clear travel information in advance such as a map of the site with the nearest bus stops and other local links like bus timetables clearly marked on the website.
- Construct a secure and well signed bike park.
- Provide dedicated buses and coaches where demand is high enough – try to work with local service providers to meet the peaks of demand.
- Consider ticket deals that include incentives for those arriving by bike or on foot.
- Provide information and signage for audiences as they leave the event.
- Work with local contractors to reduce the mileage from deliveries where possible.
- Talk to your contractors about how they can reduce the number of deliveries.

Measuring success

If you have a specific aim to reduce the environmental impact of your audience travel, you will need a way to measure this to enable a comparison between years. This could be achieved in a number of ways:

- For ticketed events where most purchases take place in advance, you may have postcode data from your ticket agent which can be used to work out the total mileage travelled by your audience.
- An audience survey can indicate how your audience travelled, either as a follow-up online survey or a questionnaire at the event.
- You can count how many people arrive by foot, bicycle, train or car by counting arrivals.
- If you charge for car parking or provide dedicated

Green Traveller Initiative: Glastonbury Festival

Every person arriving at the Festival by public transport or bicycle is handed special Green Traveller vouchers when they walk from the coach to the entrance gate or once they have locked up their bike. They contain vouchers to get money off at food stalls throughout the event and a discount on an official festival T-shirt. Plus, there are additional incentives such as being entered into a prize draw for the chance to watch a Pyramid Stage performance from the side of the stage. The idea of the scheme is to reward those who travel to the event by public transport or bicycle.

Quick links

- **Glastonbury Green Traveller Initiative:** http://www.glastonburyfestivals.co.uk/information/green-glastonbury/green-traveller-initiative/
- **Online lift share provider:** www.gocarshare.org
- **Information about traffic congestion and travel:** http://www.agreenerfestival.com/traffic-congestion-travel/

4.2 Energy

Fuel used in generators is usually one of the three main sources of environmental impact from your site operations[5], along with waste; and food and drink.

A study in 2011 found that around 12 million litres of diesel was being used at UK events annually[6], and that less than 3% of energy was derived from renewable sources. Figure 6 shows a typical breakdown of electricity used at festivals. It summarises a piece of research that was based on the monitoring of 70 different electrical power systems at 18 music festivals in the UK between 2009 and 2012.

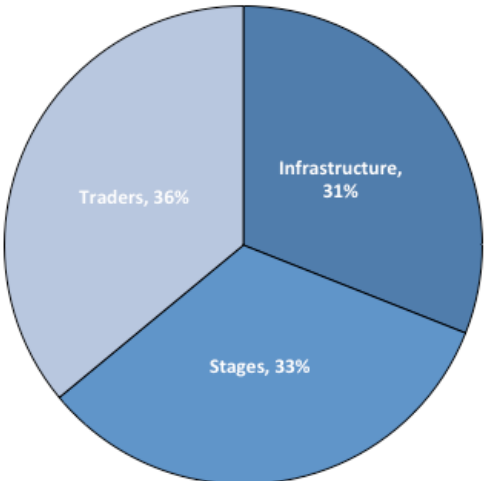


Figure 6: Typical breakdown of electricity consumption across three event functional areas (source7).

Most events could reduce their energy significantly, and many could halve their energy related greenhouse gas emissions . Various studies have found that it is common to oversize generators and waste fuel at UK outdoor events, because the information about power requirement is often not accurate enough to plan for demand5. Managing power more efficiently is often an attractive option for event organisers because using less fuel reduces costs.

In the past three years it has become more common for events to use waste vegetable oil (WVO) biodiesel in generators, and solar or hybrid solutions have become increasingly available. Hybrid systems often combine diesel generators, battery storage and solar panels, which reduce fuel usage. The source of energy, significantly affects energy related C02e emissions, as seen in Table 1 above:

Type power	Carbon Dioxide equivalent (C02e)
Diesel	2.68 kg per litre
Waste Vegetable Oil (WVO) biodiesel	Zero rated
Mains electricity (UK)	0.54 kg per kWh
Wind and solar	Zero rated

Measures event organisers can take to achieve this

Reduce fuel consumption:

- Work with power users, such as lighting companies and traders, to explore if they can reduce the amount of power they require. For example, LED lighting reduces power demand significantly.
- Make an accurate assessment of how much power is really needed. Over-estimating power requirement leads to larger generators and consequently more fuel use.
- Work with your power supplier to achieve the above. You can ask them to contact power users to work out the accurate power requirements and then to design an efficient system. If they know your aim is to achieve this, and targets are stated in the contract, it is more likely to happen. Alternatively you can ask your power supplier to provide you with a pro-forma which you can use to collect power requirements from users yourself.

Use renewable sources

- If you are using a mains-feed, ask if they are using a green tariff, and if possible, request that your energy is from a green supplier.
- Consider hybrid or solar options for your event.

There is a significant amount of advice available for event organisers about how to manage power more sustainably through the UK festival industry think-tank Powerful

[5] Green Festival Alliance (2012) Power Behind Festivals Guide, Powerful Thinking, Bristol

[6] Baker, J. 2011, What are the Barriers to Operationalising and Expanding Temporary Renewable Energy Capacity at UK Music Festivals?, MSc edn, University of Sussex, Brighton

Thinking. On their website, you will find fact sheets, case studies and research; see Quick Links section below for more details.

Measuring success

It is straightforward to measure the success of your energy savings, as you will always have an invoice for fuel after each event. Any reduction in diesel consumption is a success. If you want to be more detailed, there are a number of indicators you can use:

- Number and size of generators onsite.
- Amount of energy used; you will need to ask you power supplier to provide this.
- Percentage of renewable power used.

It is always helpful to have a starting point to measure success. If you have information from a previous year, you can use the free online Festival Fuel Tool which calculates the environmental impact of your power and compares your efficiency to the UK average.

Case study: Love Saves the Day (LSTD)

LSTD has become a significant underground dance music, theatre & performance event in the Bristol calendar attracting more than 12,000 visitors to Castle Park each day over the weekend. The team aimed to reduce their carbon footprint and chose to concentrate on energy.

What they did

In 2013 the whole site was run on 100% diesel fuelled generators. In 2014 the site was run with generators which used waste vegetable oil (WVO) biofuel, and one hybrid system (solar panels, battery storage and generator combination). They also used LED, solar powered tower lights. They planned more accurately what power they required, and booked generators accordingly.

The Results

- The energy related carbon footprint was reduced by over 90% from 8.4 tonnes to 0.64 tonnes; significantly reducing the overall impacts of the event.
- Costs remained the same relative to audience size and power requirement.

Quick links

- **The Power Behind Festivals Guide:** http://www.powerful-thinking.org.uk/resources/the-power-behind-festivals-guide/
- **Case studies and resources for managing energy at events:** www.powerfulthinking.org.uk
- **Compare your fuel consumption to industry averages using the Festival Fuel Tool:** www.powerful-thinking.org/fuel-tool
- **Energy at Outdoor Event Guide, Julies Bicycle:** juliesbicycle.com/resources/outdoor-event-energy-guide

4.3 Water

Whilst the safety and availability of water is vital for all events, water conservation, or 'efficiency', is often less considered. A renewed national focus on water regulations relating to temporary events, during and since the London 2012 Games, has prompted many larger events to improve their water planning and safety, providing an opportunity to more fully consider water conservation.

Water scarcity has become a pressing global issue affecting millions of people annually. Although droughts have occurred more frequently in recent years, scarcity is still not considered to be a serious issue in the UK. Some events have experienced the impact of water scarcity when local authorities have banned the filling of road tankers during times of drought. When this happens, water has to be sourced from further afield, which impacts the cost of the water to the client, but also has an impact on the environment due to the additional transportation required. In these circumstances particularly, preventing unnecessary water consumption is advantageous.

The environmental impact of plastics has been increasingly in the public eye in recent years. Recently the local government in San Francisco introduced a city-wide ban on the sale of bottled water from vendors operating on public land. In the UK, festivals such as Glastonbury and Shambala have been working with Bristol-based RAW Foundation to reduce plastic bottles by encouraging audiences to bring re-usable bottles, and or banning the sale of water in disposable bottles. This reduces the emissions attributable to water consumption, and reduces the amount of waste onsite.

What are we aiming for?

- Reduce water consumption, and particularly unnecessary use of water.
- Reduce travel and onsite traffic movement associated with providing water.
- Reduce the environmental impact of how water is provided – e.g. reducing the amount of disposable plastic bottles used.
- Manage waste-water responsibly.

Measures event organisers can take to achieve this

- If you are installing any temporary taps; use reduced flow taps with timed release (push taps) or sprinkler fittings to reduce water wastage from pubic taps. This also helps prevents flooding around water stations.
- Encourage users of taps to not waste water by placing signs explaining you are practicing water conservation.
- Work with traders to use water carefully, and re-use grey water where possible.
- Source water from mains where possible rather than from tanker deliveries.
- Provide staff and crew with reusable bottles (or ask them to bring their own) to reduce disposable plastics.
- Consider water efficient or waterless toilets.
- Consider banning the sale of water in disposable plastic bottles – you will need to be confident about the water infrastructure provision to achieve this.

Bristol based charity FRANK Water works with partners to increase access to safe drinking water, sanitation and hygiene in developing countries. Their FreeFill service for festivals and events provides the public with unlimited refills of filtered, chilled water when they purchase a FreeFill bottle or wristband from a fixed refill station or one of their mobile units. FreeFill reduces a festival's plastic bottle waste and recycling whilst raising funds for FRANK Water. All of the net profits made from the sale of UK-made, BPA-free bottles, are used to fund clean water projects in developing countries. FRANK also offers other water services to events, such as filtration, staffed water points and mobile services. In 2014 they attended eight significant UK festivals and many smaller local events in Bristol.

Find out more at: www.frankwater.com

Case study: Shambala Festival Bring a Bottle Campaign

In 2013 Shambala developed a strategy to eliminate plastic disposables from the festival in partnership with the RAW Foundation. They banned the sale of bottled water onsite and asked all festival-goers, staff and artists to bring their own re-usable bottles.

What they did:

- Made it easy for the audience to access water by installing more water points across the site.
- Worked with charity FRANK Water to provide free chilled filtered water on all the bars, at their stalls and using mobile water stations.
- Providing quality re-usable bottles for sale for those that forgot to bring a bottle.

The Results:

- Over 10,000 single use plastic bottles were avoided.
- A cleaner festival site.
- 93% approval rating in their audience survey.
- Funds were raised for FRANK Water.
- Raised awareness about the impacts of plastics.

Find out more about this initiative at: http://www.shambalafestival.org/essential-info/sustainability/designing-out-disposables/

Quick links

- **Julies Bicycle Guide to Water Management at Outdoor Events (2014):** juliesbicycle.com/resources/water-management-at-outdoor-events-guide
- **RAW Foundation/Kambe Events Guide to Plastic Free Festivals (2014):** http://www.rawfoundation.org/making-waves/

4.4 Food and drink

Eating, drinking and disposing of the containers used to serve food and drink are very visible aspects of an audience experience. The way food and drink is sourced, has become of increasing concern to audiences in general, both in terms of environmental sustainability and the quality of and range of food expected.

Food and drinks have a range of impacts from 'seed to plate'; from the way land and wildlife is affected by growing methods, to emissions associated with transportation. By managing food more sustainably, event organisers can play a role in improving the health and well-being of visitors, the livelihoods of farmers and producers, the welfare of farm animals, the conservation of precious wildlife and fish stocks, the greenhouse gas emissions associated with food waste disposal, and the long-term sustainability of our food system.

FACT: In the UK, 4 million people experience food poverty, whilst we throw away over half of the food available to us; approximately 4 million tonnes a year.

Source: Fareshare Southwest

Bristol as a city has a well-developed approach to food sustainability with strategies in place to support healthy, local and sustainably produced goods. The Bristol Food Policy Council published A Good Food Plan for Bristol in 2014, which sets out a citywide strategy to support and strengthen local supply chains. In addition, the national Good Food for Festivals Guide (2013) provides detailed information and advice about how festivals and events can approach food more sustainably. The Nationwide Caterers Association (NCASS) which has over eight hundred members who trade at temporary events, have recently launched an online, City & Guild accredited, sustainable catering training course in partnership with the Sustainable Restaurants Association (SRA), to help traders in their approach and provide a recognised certification. The SRA also provide their Sustainable Restaurant mark to mobile caterers.

What are we aiming for?

- Local and seasonal produce where possible.
- Sustainably sourced fish and seafood.
- Use of ethical products, such as Fairtrade.
- Good welfare standards for meat and dairy, such as free range or organic.
- Healthy and delicious food!
- Locally sourced and organic drinks.
- Reduction of food waste.
- Reduction in waste associated with serving food and drink.
- Working with traders who are committed to sustainable practices, and hold relevant accreditation.
- Using re-usable and recyclable materials used for serving food and drink.

Measures event organisers can take

Sourcing drink

- Consider local breweries for beer; there are many new micro-breweries in Bristol to choose from!
- Use British wine if available.
- Source soft drinks from organic and/or local suppliers.
- Where possible opt for bulk dispensing to reduce waste.

Well known certifications to consider:

Case Study: Fareshare South West: Surplus Supper Club & Festival Food Recycling Service

Fareshare South West's Surplus Supper Club was launched at Festivals in 2013, providing audiences with a fine dining experience cooked with food which would otherwise have gone to waste, and raising core funds for the charity which distributes food to those in need. The Surplus Supper Club now provides catering to all types of events and venues in Bristol.

Also in 2013, they launched their Festival Food Recycling Service, taking left-over edible food from traders at the end of events, and distributing it through local networks. In their first year they redistributed 2 tonnes of food, reducing the waste from the events, and providing a convenient service to traders. This service is focussed on larger multi-day events, but there are several other Bristol-based organisations keen to use edible surplus food from events – see the Quick links section for more information.

Reducing waste materials from serving food and drink, and managing concession waste sustainably

Working with concessions to minimise waste and manage waste sustainably can be a challenge. It is best to have a clear waste management plan in place for concessions, and provide the required systems back of house to enable easy separation of waste (see waste section for more detail).

- Use re-usable cups on bars where appropriate; easier for fenced events with a clear boundary than for open or un-ticketed city centre events.
- Reduce disposable plastics on bars by bulk dispensing rather than serving in individual containers.
- Specify compostable serve-ware for all traders, to reduce the impacts of the materials you use and so that it can be composted with food waste – recyclable material such as PET plastic and metals often cannot be recycled if contaminated with food.

Figure7: Examples of compostable serve-ware

Tips for working with concessions:

- Provide a clear briefing for concessions in advance, and make it part of the contract to trade at your event.
- Explain why you are putting these measures in place.
- Begin with achievable aims, such as specifying that all sugar, chocolate, tea and coffee are Fair Trade – most event caterers will be required to meet these standards at other events where they trade already.
- Offer support to concessions onsite for recycling as part of the waste contractor's responsibilities.
- Provide incentives for traders who exceed your minimum standards.
- If you have established relationships with traders, work with them over a period of two or three years to achieve ambitious standards. Draw them into a consultation process to gain an understanding of how the standards will affect them in the long term.

Download a free template Sustainability Briefing for Concessions at: www.kambe-events.co.uk/resources

Case Study: Fareshare South West: Surplus Supper Club & Festival Food Recycling Service

Bristol Food Connections was designed to inspire and educate people in Bristol's exceptional and diverse food culture, and to teach them about the important role food plays in our local economy, the environment, and people's health and enjoyment. A collection of more than 200 events took place across the city of Bristol in May 2014 which attracted 180,000 people.

All food traded had to be reared, grown or produced as locally, ethically and sustainably as possible and all animal produce had to be free range as a minimum standard. Through an online application system for traders, they were able to ask questions which enabled them to evaluate whether applicants met their standards.

The waste was managed across several city centre sites by Critical Waste, a local company specialising in sustainable events waste management. There were recycling points throughout each of the sites which were regularly cleared and taken to a central back-of-house recycling and waste point to be sorted.

In 2015 they are developing a detailed official sustainable food policy to reflect their way of working.

Quick links

- **Good Food for Festivals Guide (2013) published by Sustain:** http://www.sustainweb.org/publications/?id=243
- **A Good Food Plan For Bristol (2014) published by Bristol Food Policy Council:** http://bristolfoodpolicycouncil.org
- **Bristol Campaign for Real Ales (CAMRA):** http://www.camrabristol.org.uk
- **Sustainability Training for Caterers (NCASS):** http://www.ncass.org.uk/training-area/sustainability-training
- **The Surplus Supper Club:** http://www.surplussupperclub.org
- **Love Food Hate Waste awareness campaign.** www.lovefoodhatewaste.co.uk
- **Template Sustainability Briefing for Concessions:** www.kambe-events.co.uk/resources
- **Fareshare Southwest:** http://www.faresharesouthwest.org.uk/

4.5 Waste

The way that waste is managed and the types of products which become waste have a significant impact on an event's environmental performance.

Managing waste responsibly is not just about providing bins for collecting cans and cardboard separately, but about changing the types of materials which are brought on to an event site so that they can be managed better when they become waste.

Waste costs money to deal with, so the ideal scenario is to avoid waste in the first place. But if it can't be avoided, then organisers should seek to treat or re-use the waste so that some value can be recovered. With so many different treatment and disposal options available these days; making the decision about how to do this best can appear daunting. The European Waste Hierarchy (Figure 8) is designed to help with the decision making process and is part of a legal framework which waste producers (event organisers) must refer to when choosing the best method of dealing with their waste.

Prevention

Reducing or avoiding the creation of waste by using less material in manufacture and design. Keeping products for longer; direct re-use of items which do not require checking or repair. Also includes reducing the impacts of waste on health and the environment by reducing the amount of harmful materials in products.

Preparing for reuse

Checking, cleaning, repairing or refurbishing whole items or components which have become waste so that they can be used again without further pre-processing.

Recycling

Turning waste into a new substance or product. Includes composting and anaerobic digestion if it meets quality protocols. Doesn't include turning waste materials into fuel.

Other recovery

Includes anaerobic digestion, incineration with energy recovery, gasification and pyrolysis which produce energy (fuels, heat and power) and materials from waste; some backfilling.

Disposal

Landfill and incineration without energy recovery. Also tipping into the sea or down the drain. Release to the atmosphere.

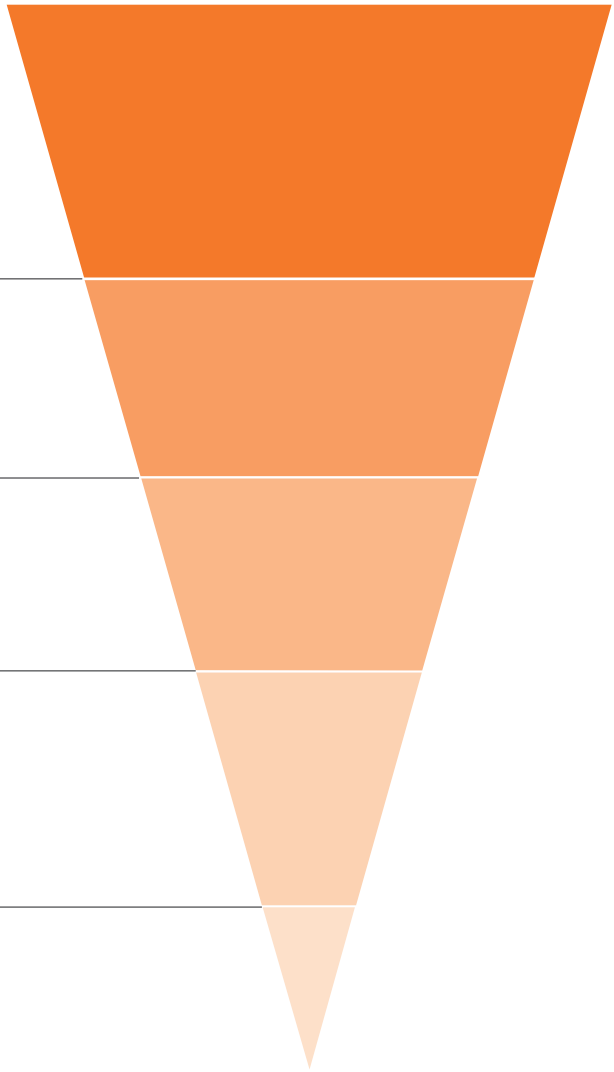


Figure 8: The European Waste Hierarchy with description of each stage.

Waste can negatively affect the experience of event-goers when it is deposited as litter or is poorly managed by contractors. The degree to which this happens depends largely upon the demographic of the audience and the visibility and the availability of bins. Sites which are allowed to become too messy can often reach a 'tipping point' whereby an audience can give up using the facilities because they feel that no one else is doing so.

The consequences of a messy site are usually in the reputational damage caused by negative media attention and by word of mouth through attendees. However litter causes continuing environmental damage when it is released into the environment, making its way into watercourses through drains and rivers and causing lasting damage to aquatic life.

Waste which is mixed together must be either separated by machinery, incinerated or landfilled, all of which cost an increasing amount of money. So it makes sense for organisers to seek alternative, cheaper methods for dealing with material, such as separating it for recycling or re-use. Separating materials on-site at source increases their value and can help turn waste into a valuable resource. Moreover, organisers should consider the cost of the products which will become waste as reducing these materials before they become waste can save money throughout the waste cycle.

What are we aiming for?

- Apply the waste hierarchy when managing waste:
  - Reduce the total amount of waste produced.
  - Increase recycling rates.
  - Separate food waste and send for composting or anaerobic digestion.
  - Reduce waste to landfill.
- Ensure that disposable materials can be recycled when they become waste.
- Reduce or eliminate the use of disposable plastics.

Measures event organisers can take

Proper planning

Methods for tackling waste at events cannot be implemented in isolation, as each element of the system is interdependent on another.

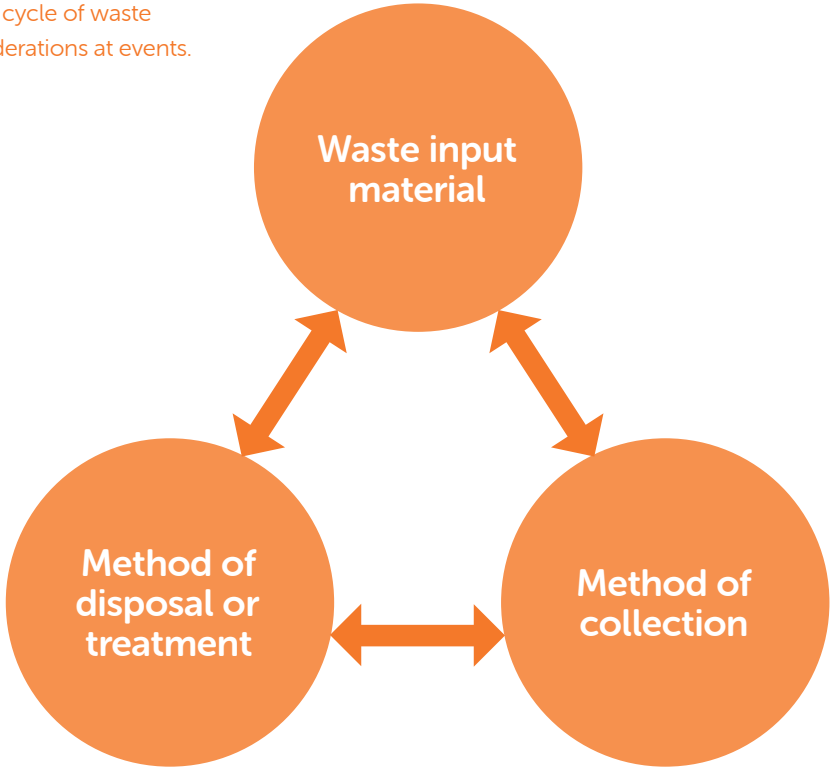
It's often tempting just to book a contractor who can provide recycling bins for the public; but a well managed waste system should go further. For instance, many packaging materials now display a recycling symbol as shown in Figure 9. But this is no guarantee that the material can be recycled locally (or sometimes anywhere in the world!), rather these symbols are an indication of a products potential to be recycled. It is important to find out from your waste contractor what they can recycle and what bins they'll be providing before allowing goods to be sold at your event; then you can tailor the products sold by concessions and bars to match the bins.

It's also important to think about how the waste will be treated afterwards. For instance, if you're planning to compost waste material, then you may want to 'enforce' the use of compostable packaging by concessions and bars. Remember that any system you choose should be repeated across the whole site without exception, otherwise you'll face issues of contamination.

Figure 10 shows the three main elements to consider when creating a waste management plan. Each is interconnected and should be considered together rather than in isolation.

Figure 9: Recycling symbols.

Figure 10: Simplified cycle of waste management considerations at events.



Functional areas

When dealing with waste it's a good idea to break the event down into different functional areas which each require a particular approach in order to manage the waste in the most sustainable way.

Public bins

This is the most publically overt aspect of the operation, so it's important that it looks good. Remember that people spend just one or two seconds throwing rubbish into a bin; this means that you have a very narrow window in which to communicate with them.

- Bins should be signed with bold messaging that they can be seen at night.
- Signage should be on the top of the bin; near where the waste will be deposited (signage on the side is next to useless in an event).
- Restrict the hole where waste is posted so that large items cannot be added – this also helps users to concentrate on the messaging which describes which item should be deposited.
- Keep the messaging simple and specific. Avoid statements like:
  - "mixed metals" when you can say "cans";
  - "mixed plastics" when you can say "plastic bottles";
  - "mixed glass" when you can say "glass";
  - "paper" when you can say "newspaper and leaflets".
- The term "mixed recycling" means different things to all of us so should be avoided. Better to provide a short list if you're choosing this method. Also, you don't have to include everything on that list – just the products which you think are most likely to occur; that way you stand a better chance of communicating with the public.
- Make sure that the bins are consistently signed and presented throughout the site so that visitors can get used to the same system throughout.
- Make sure bins are easy to see and that they can be spotted from any location in the event.

Figure 11: Examples of recycling bins provided for the WOMAD festival (left) and at Glastonbury (right).

Back of house

Behind the scenes the approach should be different. The bins needn't look so beautiful but they should be well ordered otherwise the system will not be respected:

- Display clear signage on both the sides and tops of the bins.
- Choose appropriately sized bins (usually 1100 L) as the waste will be bulkier.
- Keep waste containers protected from public areas to avoid contamination and confusion for visitors.
- Make sure facilities are appropriate to the waste being generated:
  - Bars may produce a lot of glass behind the scenes;
  - Most traders and bars will produce cardboard;
  - Food traders may produce lots of (you've guessed it) food waste!
- Talk to the traders and bars to make sure that they understand the system; it may also be useful to give them one or a few leaflets which they can stick to the wall to remind them. It often helps to assign someone to do this.
- Event traders and bars tend to be under a lot of pressure to sell their produce and therefore recycling segregation can fall down the list of priorities:
  - visit them periodically and help them tidy up; use this as an opportunity to encourage them to separate more effectively;
  - try to speak to as many people as possible from the stand, there may be different shifts and staff might not pass on the information.
- Although technical areas often don't generate much material, they can produce hazardous materials such as electrical equipment and batteries. These must not be placed in the mixed waste but collected separately and handled by a specialist contractor.

Waste to avoid or dispose of safely

The following items must now be kept separate and cannot be put in the general waste bin.

Plasterboard: can create toxic gasses in landfill and must be buried separately. Avoid its use and don't mix with other waste.

Paint tins containing paint: if tins are full then consider re-using them, otherwise they should be handled by a specialist contractor.

Batteries: often arise in technical areas (from radio mics). They must be kept separate and recycled by a specialist contractor. Consider using rechargeable alternatives.

Aerosol containers: can be recycled with cans when empty.

Gas canisters: must be disposed of safely by a specialist contractor.

Fluorescent tubes: contain mercury which is hazardous to health and the environment. Must not be broken and should be disposed of by a specialist contractor.

Electrical equipment: widely recycled these days and must be dealt with by a specialist contractor.

Healthcare waste: these will usually arise from a medical facility and must be contained securely during your event and disposed of by a specialist contractor.

Sanitary waste: this waste is not hazardous but considered 'offensive'. Can be mixed into landfill but many organisers choose to have it dealt with by a specialist contractor.

Litter-picking

Items which have been dropped on the floor can be one of the most costly elements of a waste management operation to deal with. But they also represent an opportunity to segregate waste effectively. Organisers should compel their cleansing contractor to separate waste as it is collected into different bags and send it for recycling. Many modern contractors already do this as part of their operations, but some traditionalists will claim that it costs too much or that it's too difficult to train temporary staff. They may be right but this doesn't stop you encouraging them to become more progressive by writing this into their contract.

Campsites

These can be one of the most difficult areas of an event to manage because they often cover a large area and the waste is produced differently:

- Remember that campers will generate their material much in the same way as at home i.e. in the area around their tent.

- Consider handing out different coloured bags with the desired contents printed clearly on the bag. If this is done as the campers arrive, it can remind them that there is a system in place.
- Construct 'pens' from Heras fencing or crowd barrier for campers to deposit their bagged waste; sign them clearly and empty them regularly throughout the event.
- Position containment facilities near entrances, exits and near other campsite services such as toilet and water taps. This will ensure that the maximum number of visitors see that the facilities exist.
- Campervan fields often require less attention as the campers often take their waste home. Try placing facilities by the exit gate or near pedestrian exits to 'advertise' their presence.
- Consider handing out bags to campers as they clear up to encourage them to clear up their mess.

General

- Reduce the number of waste streams and restrict to recyclable materials.
- Be aware, there are some unscrupulous contractors out there who will make spurious claims about the amount they are recycling.
  - Demand that they produce waste transfer notes for all material shipped from the site.
  - Ask for the details of the site where each waste stream is being taken before the event to make sure that the contractor is planning to treat your waste responsibly. For each disposal site, ask for a copy of their Environmental Permit or Exemption (from an Environmental Permit).
  - Some contractors claim that they will "sort material off-site" after the event. Ask for a full, written explanation of how this is being done. Do they use machinery? If so what type?.
  - Consider having the above paperwork checked by a professional.

Case Study: Tokyo Dub

Greenbox Events have been cleaning up waste at music festivals and sporting events since 2011 and currently work at around 30 events across the UK. At Tokyo Dub in 2011 they provided a comprehensive recycling service which achieved a recycling rate of just over 54%

- Recycling bins (size - 240L)were provided in public areas for 'cans', 'plastic bottles', 'glass' and 'all other waste'.
- Traders were provided with:
- Green bin bags to put cans, plastic bottles, glass bottles and paper.
- Builders sacks to separate cardboard.
- 1100L bin for residual waste.
- Encouraged to leave cooking oil in its original container.
- Litter-picking staff source segregated material during collection, http://greenboxevents.co.uk/

Toilets

Environmental problems relating to toilets which are attached to the sewerage system are usually related to environmental pollution of water-courses and excessive use of water. The majority of events sites use Portaloos these days which use very minimal quantities of water which is blended with a mixture of deodoriser (fragrance), biocide and blue dye. The main problem with this mixture is the inclusion of the biocide which prevents the decomposition of the waste and may cause environmental pollution after disposal. The other main problem is that the waste has to be transported on the road.

- Ask your sanitation provider to use biocide free flushing liquid.
- One solution is to provide compost toilets:
  - These often improve the user experience when compared to Portaloos.
  - However when compared to the biocide –free Portaloo, this solution only makes sense when the transport element is taken out and the material is left on the site – not an option in Bristol!

- More appropriate for multi-day rural events with the ability to retain and process the waste on the land.
- Compost loo operators often separate urine which has to be sucked out and disposed of by the usual Portaloo contractor; doubling up work.

- Consider whether booking more toilets and reducing servicing will help prevent vehicle trips without affecting costs.
- Ask your sanitation provider to use recycled toilet paper.

Quick links

- **Zero Waste Scotland Sustainable events Guide:** http://www.zerowastescotland.org.uk/sites/files/zws/Sustainable%20Events%20guide.pdf
- **Julie's Bicycle Outdoor Events Waste Guide**: juliesbicycle.com/resources/waste-management-at-outdoor-events-guide
- **WRAP Cymru Events Recycling Guide:** http://www.wrapcymru.org.uk/sites/files/wrap/Wales%20Event%20Recycling%20Guide.pdf

4.6 Production, infrastructure & purchasing

The production of your event encompasses many materials, equipment, processes, contractors and services. The impact of your supply chain stretches far beyond the event itself, from mining to manufacture; transport; how materials are dealt with after their useful life at an event; and how the companies who provide our products and service are managed.

This section gives a brief overview of how we can tackle some of the impacts of event production, and provides some easy-to-implement suggestions for how you can reduce them.

What are we aiming for?

- Sustainable sourcing of materials used in construction, e.g. Forest Stewardship Council (FSC) timber.
- Energy efficient equipment such as LED stage lighting and low energy festoon
- Hire and/or re-use equipment where possible.
- Reduce the travel associated with delivery and collection of infrastructure.

Measures event organisers can take

Lighting, sound and visuals

- Consider LED stage lighting to reduce energy demand and associated costs.
- Ask your lighting, sound and visual art providers to submit accurate energy specifications which will enable the power company to plan confidently for demand, and avoid the over-sizing of generators.
- Opt for rechargeable batteries for microphones and stage equipment.

Materials – creative build and site construction

- Use wood products from a certified sustainable source.
- Avoid materials which cannot be recycled, such as PVC banners and Correx board.
- Aim to hire rather than buy if you may not need to use it again.
- Build things with a view to them being reused where possible.
- Encourage construction methods which make it easy for materials to be separated when dismantled so they can be recycled.
- Consider whether materials you are using will be useful to someone else afterwards e.g. stage sets, materials or old equipment – this may save you disposal costs.

Infrastructure and services

- Aim to minimise travel for deliveries and collections by using local companies where possible, and communicating your aim to reduce travel-related carbon emissions.
- Where possible, work with companies who manage their company and operations sustainably; your contractors are part of the supply chain impact associated with your event. Don't be afraid to request their sustainability policies or ask them what they are doing to minimise their impacts.

Promotion, merchandise and accreditation

- Use recycled, sustainably sourced, un-chlorinated and uncoated paper or card for flyers and posters, and request water based inks.
- Work with sponsors to ensure give-aways are made from sustainable materials and where possible reduce promotional materials given away onsite in favour of 'experiential' marketing.
- Avoid using plastic-coated laminates for identification and signage where possible.
- Choose lanyards and wristbands made from sustainable materials.
- Use Fairtrade and organic T-Shirts printed with water based inks and vegetable dyes.

Case Study: The Old Vic: Greening production

The Old Vic aimed to reduce the environmental impact of their theatre productions. They used a performance of Miss Julie to try new approaches and measure impacts.

What they did:

- The set was mostly built with materials which were reused or sourced second-hand.
- Props and costumes were hired or purchased as locally as possible.
- After the show, any useable remaining materials were recycled or taken to a reclamation centre by Scenery Salvage, a company which specialises in storing and reusing sets from the events industry.
- Light and sound equipment was sourced locally, and energy demand was taken into account, and monitored.
- They used the Julie's Bicycle Industry Green Tool to measure all of their impacts.
- All create and production staff were engaged in the process, helping to make small savings such as switching off lights when not in use.

The Results

- No set, prop or costume elements went to landfill after the show.
- They reduced energy consumption.
- Overall, they reduced the carbon emissions of the production process by 40%.

The learning from this event has since been applied to many other productions;

Quick links

- **Grown in Britain Campaign for timber products:** http://www.growninbritain.org
- **Forest Stewardship Council certification:** http://www.fsc-uk.org/
- **Julie's Bicycle Creative Industry Green tool:** http://www.juliesbicycle.com/industry-green
- **Scenery Salvage Ltd:** http://www.scenerysalvage.com/home/
- **The Better Batteries Campaign:** http://www.juliesbicycle.com/about-jb/campaigns/better-batteries/

5 STEP 3: Reviewing & communicating progress

It's important to have reliable information to assess whether you have met your aims, compare performance year on year, and to communicate with staff, contractors, licensing authorities and the audience about successes and areas that require more focus for future events.

Collecting information or data can be a very straightforward exercise or more complex and detailed, depending on what suits the scale and type of your event and your aims and approach. For example, if one of your aims is to increase recycling, it may be that all you need to do is ensure the waste contractor provides reliable evidence of what happened to the waste after it left site. Or, for larger events with detailed sustainable energy management plans, monitoring of all generators onsite to determine efficiency may be carried out, highlighting where energy can be reduced in future. At all scales, the key is to include what and how you will measure at the very outset, in your Action Plan.

Multi-year events may choose to have a 3 year plan with overarching aims, and an annual review of achievements after each event.

What are we aiming for?

- Clear targets at the outset.
- A method for how aims will be measured, when and by whom.
- A clear process of reviewing achievements – e.g. a report or review document.
- Achieving industry average benchmarks or better.
- Communicating success with staff, contractors and your audience.

Measures event organisers can take

- In your Sustainability Action Plan, provide clear targets which are signed off by senior members of the organisation.
- Communicate what will be required with everyone involved – staff and contractors.
- Ensure that someone is responsible for overseeing the collection of all the relevant information.
- If a contractor is responsible for providing information post-event, make it part of the contract.
- Aim to maintain an open dialogue with contractors so that learning can be successfully captured as opposed to hidden to protect perception of performance.
- Consider using established tools to assess or measure the overall impact of your event, such as the Julie's Bicycle Industry Green Tool and the A Greener Festival Award. For larger events, the WRAP Waste Management Tool provides a system to plan for and manage waste, and the ISO20121 standard provides a management framework to integrate sustainability into your organisation.
- Once you have information or a post-event report on your performance, communicate a summary with staff, contractors and to your audience across all relevant communication platforms.

Quick links

- **Creative Industry Green Tool for measuring impacts:** http://www.juliesbicycle.com/industry-green/ig-tools
- **Information about ISO20121 standard**: http://www.iso20121.org
- http://learninglegacy.independent.gov.uk/themes/sustainability/london-2012-sustainability-plan-and-reports.php
- **A Greener Festival Awards assessment:** http://www.agreenerfestival.com
- **Positive Impact provide advice on attaining ISO 20121 accreditation:** http://positiveimpactevents.com/

6 Summary Checklist

Print and use this checklist as an easy reference for what you are planning to do:

1. First Steps

- ☐ Do you have someone responsible for managing sustainability?
- ☐ Do you have an Environmental Policy for your organisation?
- ☐ Do you have a Green Action Plan for your event?

2. Planning and Implementation

Travel

- ☐ Do you have a plan to encourage sustainable transport choices?
- ☐ Are you providing a bike parking area?
- ☐ Have you provided clear travel information to your audience?

Energy

- ☐ Have you agreed with your power provider how you will aim to reduce fuel?
- ☐ Are you using any renewable energy?
- ☐ Have you made an accurate assessment of how much power you need?

Water

- ☐ Are you using water saving taps?
- ☐ Are you encouraging the use of, or providing, re-usable bottles for staff and crew?
- ☐ Will you communicate the importance of conserving water to staff and audience?

Production, infrastructure and services

- ☐ Are you sourcing sustainable products and materials?
- ☐ Are you using local companies where possible?
- ☐ Have you chosen sustainable suppliers/services – e.g. using recycled toilet paper?

Food and drink

- ☐ Have you set a minimum standard for sourcing food and drink?
- ☐ Do you have a policy or document to communicate this with staff and traders?
- ☐ Are you using compostable serving containers?

Waste

- ☐ Are you reducing the amount and number of types of materials present on site?
- ☐ Will you have recycling in place for back of house and the audience areas?
- ☐ Are you clear about what will happen to your waste when it leaves site?

3. Measuring progress

- ☐ Have you agreed clear aims or targets for your event?
- ☐ Do you have a plan in place to collect information to measure your impacts?
- ☐ Will you measure your overall carbon impact using an established tool?
- ☐ Will you communicate the results? If so how?

7 Further information & resources

Energy

- **European Music Energy Efficiency Initiative:** http://www.ee-music.eu

Water

- **Making Waves: Plastic Free Festival Guide, Raw Foundation & Kambe Events (2014):** http://kambe-events.co.uk/campaigns/making-waves/
- **Sustainable Event Management**: A Practical Guide, Meegan Jones (2014)
- **WRAP Water Efficiency Guide:** http://www.wrap.org.uk/content/rippleffect-water-efficiency-businesses
- **WRAP Guide to saving money through water efficiency:** http://www.wrap.org.uk/content/saving-money-through-resource-efficiency-reducing-water-use

Production, infrastructure and purchasing

- **JB Guide to sustainable production:** http://www.juliesbicycle.com/resources/sustainable-production-guide

Food and drink

- **The Fairtrade Foundation:** www.fairtrade.org.uk
- **RSPCA Freedom Food:** www.rspca.org.uk/freedomfood
- **Red Tractor:** www.redtractor.org.uk
- **The Soil Association:** www.soilassociation.org
- **The Marine Stewardship Council**: www.msc.org
- **Good Fish Guide, The Marine Conservation Society:** www.mcsuk.org
- **Nationwide Caterers Association (NCASS):** www.ncass.org.uk
- **Sustainable Restaurant Association:** www.thesra.org
- **Fareshare:** www.fareshare.org.uk
- **The Food Waste Network:** www.vegware.com/news/?p=732
- **Love Food Hate Waste awareness campaign:** www.lovefoodhatewaste.com

Waste Management

- **WRAP: Advice for event management sector, including an online waste management tool and guide to recycling:** www.wrap.org.uk/category/sector/event-management
- **Sustainable Event Management:** A Practical Guide, Meegan Jones, Routledge, 2014.
- **Love Your Tent campaign:** http://loveyourtent.com
- **Making Waves:** Global lessons to inspire local actions, Raw Foundation/Kambe Events. Plastic-free festival guide: www.festivalinsights.com/wp-content/uploads/Making-Waves-Festival-Guide-Online-FINAL.pdf
- **Defra guidance on applying the waste hierarchy:** https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69403/pb13530-waste-hierarchy-guidance.pdf
- **Environmental Protection Act Section 34. Waste Management:** The Duty of Care, A Code of Practice (DEFRA. 1996)

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We would like to give special thanks to Chris Johnson and Ed Cook for the extensive work carried out in producing this guide.

Chris is co-founder and one of five directors of Shambala Festival, a Director of Kambe Events and co-founder and chair of Powerful Thinking - the UK's think-do tank on sustainable energy for events. A regular speaker at events, sustainability consultant, occasional lecturer and campaigner, Chris has practical knowledge of how to implement initiatives on the ground, and industry-wide experience of delivering green initiatives. Chris is also the Associate for Festivals and Events with Julie's Bicycle.

Ed works for Resource Futures; an independent environmental consultancy which specialises in providing advice on the efficient use of material resources and behavioural change for sustainability. He has over 12 years' experience in solid waste management operations and has overseen waste management operations at more than 350 UK outdoor events over his career; pioneering innovative sustainable waste management solutions all over the UK. He worked on the waste management strategy for the London 2012 Olympics and now provides advice on sustainability across the waste and events industries. Ed is a Chartered Waste Manager and has a Master's Degree in Waste and Resource Management from Cranfield University where he is now a guest lecturer on mechanical-biological treatment.