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

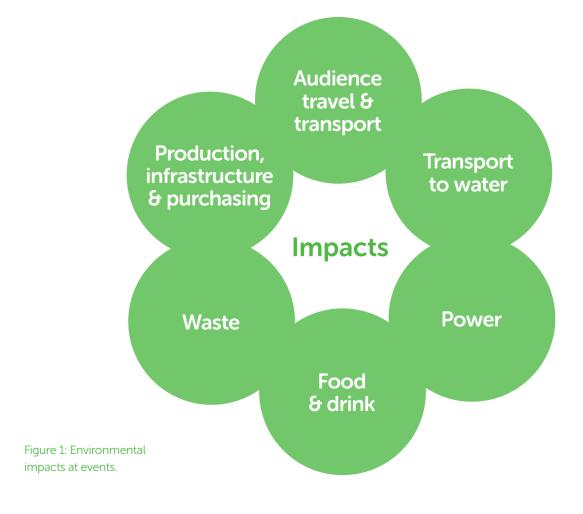
All events have environmental impacts; requiring transport, consuming energy, water, food and materials, and producing waste and carbon emissions. These impacts can be addressed through measures such as green travel initiatives, recycling systems, managing energy and water more efficiently and choosing sustainable products, materials and suppliers.

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 event. 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.

To reduce the impact of an event, all these aspects should be considered. There are many small and easy steps you can take to begin the journey of greening your event in the first year.



This section outlines some of the practical steps you can take to reduce the environmental impacts of each area of your event.

### **Audience travel**

At most events, vehicle travel is the largest source of carbon emissions; with audience travel typically accounting for over 70% of an event's total impact. Staff travel and deliveries are also significant.

Figure 2 below shows the carbon emissions per km of different ways to travel, and helps us to see which travel types have the least impact.

Events can often influence rather than control how their audience 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 would includes detail about how they intend to manage how people arrive and leave from their event. For smaller events, it may be the case that you expect most people to arrive on foot, bicycle, car or public transport, but considering what you can do to encourage sustainable options is still worthwhile.

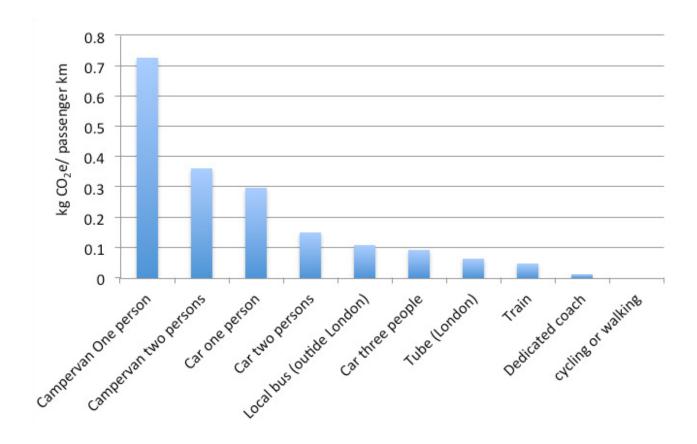


Figure 2: Relative (equivalent)  $CO_2$  emissions for different transport types (Source: DEFRA Company Reporting Guidelines 2014).

<sup>&</sup>lt;sup>1</sup> Powerful Thinking (2015), The Show Must Go On Report.

#### What you are aiming for:

- High or increased car occupancy.
- More people using public transport buses, trains or coaches.
- · More people walking and cycling.

#### How you can do it:

- Communicate clear travel information in advance e.g. a map of site with the nearest bus stops and other local links clearly marked on the website or a flyer, and links to bus timetables.
- Provide a bike parking area.
- Provide dedicated buses and coaches where demand is high enough – try to work with local service providers to meet the peaks of demand.
- Provide good information and signage onsite for when the audience is leaving the event.

### **Electricity**

Fuel used in generators is usually one of the three main sources of environmental impact from your event itself<sup>2</sup>. Most events could reduce their energy use by planning more carefully or using energy efficient equipment. If you are using mains power, you can still usually find ways to reduce the amount of power you use.

#### What you are aiming for:

- Reducing the amount of diesel fuel at your event.
- Increasing renewable energy solar, waste vegetable oil biofuel, wind or pedal power.

#### How you can do it:

- Ask power users, such as stage lighting companies and caterers if they can reduce the amount of power they require. For example, LED stage lighting reduces power demand significantly.
- Ask your power provider to work out an accurate power requirement by contacting power users to avoid using a bigger generator than needed.
- If you are plugging into the mains, ask if the supplier if they are using a green tariff.
- Consider hybrid or solar options for your event.

### Water

The safety and availability of water is vital for all events, but using the least amount of water possible is often less considered. Some events have experienced the impact of water scarcity, as some local authorities have banned the filling of road tankers when restrictions are in place. When this happens, water has to be sourced from further afield. One significant environmental impact related to water is the use of disposable plastic bottles. Using plastic bottles, rather than reusable bottles or cups, wastes resources caused by transportation and production and creates an unnecessary product which needs to be disposed of.

#### What you are aiming for?

- Reduced water consumption, and particularly unnecessary use of water.
- Use tap water where possible rather than bottled water.

#### What you can do:

- Provide easy and visible access to taps for drinking water.
- 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.
- Use signage to encourage users not to waste water e.g. "please save water".
- Source water from mains where possible, rather than using bottled water.
- Provide staff and crew with re-usable bottles (or ask them to bring their own) to reduce disposable plastics.
- Consider water efficient or waterless toilets.

### Materials & equipment

Events use many materials, equipment, contractors and services. The impact of your 'supply chain' stretches far beyond the event itself, from mining to manufacture and transport, to how materials are dealt with after their useful life, and how the companies who provide your products and services are managed.

#### What you are aiming for?

- Avoiding unnecessary use of materials and resources.
- Using materials from sustainable sources.
- Avoiding the use of harmful materials such as plasterboard, batteries and toilet blue which contains biocides.

<sup>&</sup>lt;sup>2</sup> Green Festival Alliance (2012) Power Behind Festivals Guide, Powerful Thinking, Bristol

- Use energy efficient equipment.
- Reduced travel associated with delivery and collection of infrastructure.
- Use wood products from a certified sustainable source, e.g. Forestry Stewardship Council (FSC).
- 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 being re-used where possible.
- Build things in a way that makes 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 also save you disposal costs.
- Use recycled, un-chlorinated and uncoated paper and card for flyers and posters.
- Use Fairtrade and organic T-Shirts printed with water based inks and vegetable dyes.
- Use local companies where possible to reduce delivery distances.

### Food & drink

Eating, drinking and disposing of the materials used to serve food and drink are very visible aspects of an audience experience, and the way food and drink is sourced is of increasing concern to audiences generally; 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 and storage. 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.

#### What you are 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.
- Reduced food waste.
- Reduced waste from the way food is served.
- Using re-usable and recyclable materials used for serving food and drink.

#### What you can do:

#### 1 Sourcing food and drink

- Set a minimum standard for food at your event see certifications to consider below.
- Provide information to help caterers to source food and drink to meet your standards e.g. a recommended list of local wholesalers.
- Consider how you will check your standards are being met.
- Consider local breweries for beer there are many new micro-breweries in Bristol to choose from!
- Source soft drinks from organic and/or local suppliers.
- Where possible opt for bulk dispensing (barrels/kegs and taps) on bars to reduce waste.

#### Well known certifications to consider:



**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.

### 2 Reducing food waste and putting edible surplus food to good use

- Work with traders to reduce food waste by placing importance on the issue. For example, avoiding bringing excess food onto site.
- Find an organisation who can take edible left-over food at the end of the event. This is often a welcome service for traders and can reduce waste costs for the event.
- 3 Reducing waste materials from serving food and drink
- Ban single sachet servings of ketchup, salt, milk etc. it creates waste and often litter on your site, and a large bottle is a much better use of resources.
- Reduce disposable plastics on bars by bulk dispensing rather than serving in individual containers e.g. using kegs and taps rather than serving beer in cans.
- 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. Expanded polystyrene is not recyclable!
- Consider reusable cups on bars where appropriate, or make sure disposable cups are made from

FACT: Expanded Polystyrene cups are made from non-renewable sources, are not recyclable, and take thousands of years to decompose. A paper or cardboard cup can be made from recycled and/or sustainably sourced materials, is easily recycled, and decomposes in weeks.



Figure 3: Examples of compostable serve-ware.

An Example Sustainability briefing for concessions is available for free at: www.kambe-events.co.uk/resources

FareShare South West takes food that would otherwise be wasted and redistributes to charities in the South West. http://www.faresharesouthwest.org.uk

### Managing waste

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 4) 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.

The accepted best approach to dealing with waste in general can be seen in Figure 4.

#### What are we aiming for?

- Reduce the total amount of waste produced.
- · Increase recycling.
- Send food waste for composting or anaerobic digestion.
- Ensure that disposable materials can be recycled when they become waste.
- Reduce or eliminate the use of disposable plastics.

#### Prevention

Reducing the amount of waste generated by using less material in design and manufacture. Keeping products for longer; re-use. Using less hazardous materials.

#### Preparing for reuse

Checking, cleaning, repairing, refurbishing, whole items or spare parts which have already become waste.

#### Recycling

Turning waste into a new substance or product. Includes composting and anaerobic digestion (if they meet a certain standard).

#### Other recovery

Can include anaerobic digestion (without quality standard), incineration with energy recovery which produce energy (fuels, heat and power) and materials from waste; some backfilling.

#### **Disposal**

Landfill and incineration without energy recovery.

Figure 4: European waste hierarchy.

#### What you can do:

Methods for tackling waste at events cannot be implemented in isolation, as each element of the system is interdependent on another. It's also important to think about how the waste will be treated afterwards.

- Plan...talk to your contractor.
- Traders encourage them to use either re-usable or compostable food and drink containers.
- Make sure that the bins are clearly labelled, so it is easy for people to understand what they are supposed to do.
- Make sure bins are easy to see and that they can be spotted from any location in the event.
- Reduce the number of materials onsite and restrict to recyclable materials.

- Brief staff to separate when picking up waste from the floor.
- Provide caterers and bars with recycling bins behind their stalls/tents.





Figure 5: Examples of recycling bins.

#### 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.

### It's important to know whether you have been successful when making efforts to green your event. There are several recommended ways to achieve this:

- Set some clear goals when planning your event for example achieving 50% recycling reducing energy, or sourcing local food.
- Use established tools to measure the overall impact of your event, for example the Julie's Bicycle carbon calculator for events, the 'Industry Green Tool', (see links section at the end of this guide). This will help you to measure between years.

1. First steps

☐ Do you have someone responsible for, or thinking

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

☐ Production, infrastructure and services

☐ Are you sourcing sustainable products and materials?

	about making your event greener?	☐ Are you using local companies where possible?			
☐ Do you have a Green Action Plan for your event?		☐ Have you chosen sustainable suppliers and services - e.g. using recycled toilet paper?			
	2. Planning for a greener event:				
Traval		Food and drink  ☐ Have you set a minimum standard for sourcing for and drink?			
	☐ Are you providing a bike parking area?	☐ Do you have a policy or document to communicate this with staff and traders?			
	☐ Have you provided clear travel information to your audience?	☐ Are you using compostable serving materials?			
		Waste			
	nergy  Have you agreed with your power provider how you	☐ Are you reducing the amount and number of types materials present onsite?			
	will aim to reduce fuel?	☐ Will you have recycling bins (including for food waste)			
	☐ Are you using any renewable energy?	in place for back of house and the audience areas?			
	☐ Have you made an accurate assessment of how much power you need?	☐ Are you clear about what will happen to your waste and recyclables when they leave site?			
	Are you going to measure what power you have used so you can compare this with future years?	3. Measuring progress			
	Makan	☐ Have you agreed clear aims or targets for your event?			
	Water  ☐ Are you using water-saving taps?	Do you have a plan in place to collect information to measure your impacts?			
	☐ Are you encouraging the use of, or providing, re-usable bottles for staff and crew?	☐ Will you measure your overall carbon impact using an established tool?			
	☐ Will you communicate the importance of conserving water to staff and audience?				

The easiest way to approach making your event greener is to create a simple document outlining what you intend to do, how you will do it, and how you will know if you've been successful. This is often called an action plan, and would normally include the following:

- **Event details**, e.g. brief description, site location and how many people you are expecting.
- A brief statement about your overall intention e.g. "to reduce the overall impact of your event".
- Your 'Green aims', e.g. increase recycling, or reduce energy use.
- **Specific targets**, e.g. achieve 50% recycling, or increase recycling by 20%.
- Who is responsible for making it happen name and position.

- How you will achieve it, e.g. reducing energy use by working with the power provider to make more accurate assessment of what is required and reducing generator sizes.
- How you will measure, e.g. we will ask the waste contractor to provide evidence of how much waste was recycled, and/or we will use a carbon calculator to measure the overall impact of the event.
- How you will review and communicate about achievements, e.g. "we will have a team meeting to talk about the carbon calculator results and what we have achieved after the event".

Aim	Specific target(s)	Who is responsible?	How will it be achieved?	What will be measured?	How will it be measured?	Comments or notes
Increase overall recycling	75% overall recycling	John Wayne  Operations  Manager	<ul> <li>Strict policy on food containers.</li> <li>Use recycling bins onsite</li> </ul>	The amount of recycling when waste reaches the waste facility	Waste company have agreed to provide tickets from when waste is deposited	Agreements about waste ticket in the contract or agreement with provider

Table 1: Outline Green Action Plan example.

You can download a free WORD template Green Event Action Plan at www.kambe-events.co.uk/resources

## General advice about making events greener

- Sustainable Event Management: A Practical Guide (Meegan Jones, 2014)
- Festival Green Awards initiative and online resources: www.agreenerfestival.org
- Resources and detailed guides: www.juliesbicycle.com

#### Electricity at events

 Case Studies, fact sheets and the Power Behind Festivals Guide available at:
 www.powerful-thinking.org.uk

#### Water and plastic bottles

- Guide to water management at outdoor events (Julies Bicycle, 2014): www.juliesbicycle.com/ resources/water-management-at-outdoor-events
- Making Waves: Plastic Free Festival Guide, (Raw Foundation & Kambe Events, 2014): http://kambe-events.co.uk/campaigns/making-waves/

#### Food and drink

#### Guides and resources

 The Good Food for Festivals Guide (Sustain, 2014): http://www.agreenerfestival.com/wp-content/uploads/ pdfs/GOOD\_FOOD\_GUIDE\_FOR\_FESTIVALS.doc.pdf

#### Certifications, campaigns and services:

- 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.foodwastenetwork.org.uk
- 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

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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 also now a guest lecturer on mechanical-biological treatment.









