

Bristol green event guides

indoor venues

In it for good

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

All events and venues 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 for indoor venue managers on how to manage their buildings more sustainably and outlines the simple steps you can take to reduce the impacts of each aspect of your operation. This guide is also for event organisers who use indoor venues which they don't own. Managing sustainability in this context can present challenges because event organisers have less control over the day-to-day operations in the building. This guide shows event organisers how they can help to positively influence indoor venue managers and encourage more sustainable operations as a legacy of their event.

The word 'sustainability' can mean a variety of different things to different people and organisations. One famous definition¹ 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.”

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!

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 economic, 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 six Kyoto greenhouse gases. It is used to consistently evaluate the future impacts of releasing (or avoiding the release of) different greenhouse gases.

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.

Understanding the impacts of your operation or venue will help you make informed decisions when considering the options and priorities for making changes.

For many indoor venues, the most straightforward opportunities to reduce impacts are **energy** and **waste management**, both of which can also reduce costs. Venues should also consider sourcing and procurement. Everything we use is made from materials

sourced from somewhere; manufactured and moved to where they are needed and causing impacts all along the supply chain. The same applies to the food and drink consumed, and the materials used to serve it.



Figure 1: Environmental impacts at events.

To reduce the impact of managing an indoor venue, all these aspects should be considered in terms of the type of product(s) and services being used, their amounts, and how materials are disposed of. For example, there may be an opportunity to reduce energy consumption and costs by installing energy efficient lights; products and materials can be sourced through certified schemes, such as Forest Stewardship Certification (FSC), and/or from local sources which reduces travel miles.

In 2013 the Arts Council England made reporting on environmental impacts mandatory for all funded National Portfolio Organisations (NPO's). The end of year analysis shows that across 62 cultural buildings, £810,000 of energy savings were made in one year alone by managing energy more efficiently. Figure 2 shows the reporting after one year of the initiative.

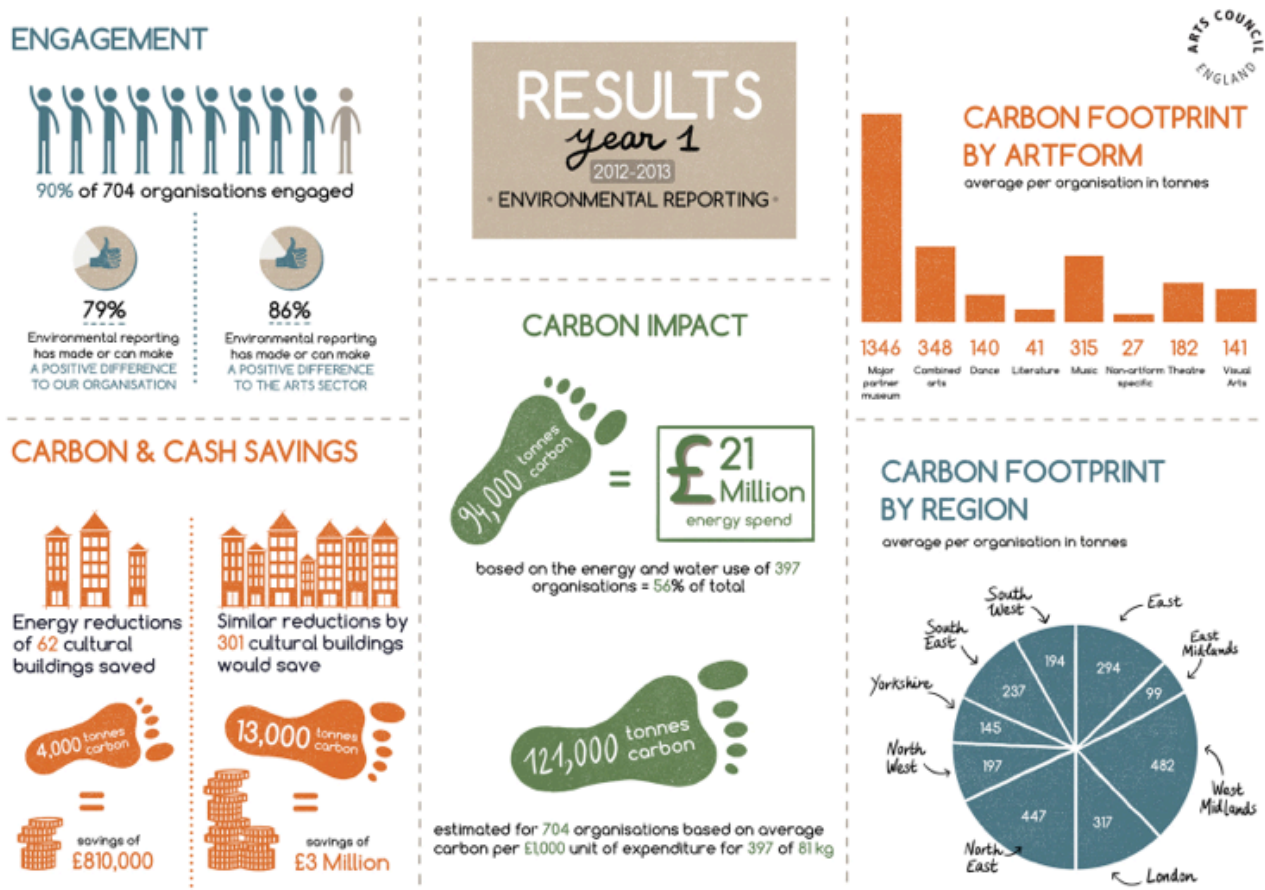


Figure 2: Results from year one of Arts Council England Environmental Reporting (source: Julie's Bicycle).

3.1 Environmental policy

Many organisations may already have an Environmental Policy in place. For those that don't, it should be a broad statement of an organisation's overall environmental ambitions, providing the foundations for how sustainability is integrated into your operations.

There is no specific way in which it should be written, but it should be specific to your organisation, its mission statement and its activities. It is useful to have an understanding of your impacts before you start, so that

the policy represents real understanding of opportunities to reduce impacts. It is usually a short document of one or two pages; Figure 3 shows 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-and-action-plan-guidelines>

3.2 Green action plan

An action plan is a short planning document which clearly sets out targets for reducing impacts; detailing how you expect to achieve them. As indoor venues and events vary considerably due to type, size, audience profile and location, your action plan will be unique to your company and building. Figure 4 below 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.

This section of the guide outlines some of the practical steps you can take to reduce the environmental impacts of your venue. Whilst for many, the ultimate goal is a reduction in overall greenhouse gasses; each activity within your operation represents specific impacts and challenges.

4.1. Staff and audience travel

Staff and audience travel can be a significant element of a company's impacts. For staff this includes travel to and from work, and work related travel; for the audiences, it's the way that they travel to the venue itself. Vehicles produce emissions, and thus reducing their use is the key to reducing impacts.

What are we aiming for?

- Reduced vehicle journeys to and from the workplace and work-related journeys.
- More staff and customers using public transport.
- More staff and customers walking and cycling.

Measures venue managers can take:

Encouraging cycling to work:

- Is it easy for staff and customers to travel to the workplace by bike? Consider providing secure bike parking and shower facilities.
- There are several government backed employer initiatives which make it more affordable for staff to purchase a bike to use for commuting – see quick links below.
- Signpost people to safe cycling routes in Bristol, such as offered on the Better By Bike website (see Quick Links below).
- Offer staff cycling training to increase confidence.
- Consider appointing a cycle champion within the organisation – see Better By Bike for advice on what this entails and how it can help (see Quick Links).

Reducing vehicle use:

- Create an initiative which records company travel, creating an annual benchmark to improve on the following year. This could form part of an overall aim to calculate the carbon footprint of your organisation.

- For larger companies, consider ways to create a healthy competition between departments in reducing their vehicle travel, and incentives such as rewards or awards.
- Consider how you can avoid unnecessary travel, for example allowing home-working, opting for Skype meeting where possible, and holding meetings or events in places easily accessible using public transport.
- Promote car sharing and public transport with staff.
- Consider joining in with the International Car Free day, on September 22nd annually. Bristol City officially takes part.

Measuring success

To work out how effective your efforts are, you will need to know what your starting point is – usually a survey of how people travel and/or implementing a method of recording company travel is put in place. Your finance department will know how much fuel is purchased annually from receipts, and a staff survey can identify how people choose to travel to work. Initiatives can be measured against this first year of data, and may be as simple as reducing the amount of company travel miles or the number of employees coming by bike, walking or public transport.

Case study: Club Surya, Pentonville Road, London

As well as providing a piezoelectric (energy generating) dance-floor, rainwater flush toilets and a roof covered in solar panels; Club Suriya encourages its audience to travel more sustainably. Clubbers are questioned on entry and asked to provide proof that they have travelled there by public transport, by bicycle or on foot; those who have travelled sustainably are allowed free entry, allowing them to save a bit more money for later in the evening.

Quick links

- **Tax free bikes with the Cycle Scheme:**
<http://www.cyclescheme.co.uk>
- **Tax free bikes with Bike2Work:**
<http://www.bike2workscheme.co.uk>
- **Sustran:** <http://www.sustrans.org.uk>
- **The Bristol Better by Bike campaign:**
<http://www.betterbybike.info>
- **Advise on company vehicle management with the Energy saving Trust (EST):**
<http://www.energysavingtrust.org.uk/businesses/content/guides-fleet-briefings-and-webinars>
- **Better By Bike Cycle Champions:**
<http://www.betterbybike.info/cycle-champions/>

4.2 Energy

Energy is a significant area where venues can achieve reductions in use and costs, although depending upon whether you are the owner or a tenant may affect your ability to change things such as replacing old lighting fixtures with more efficient types. Venues can also choose a renewable energy supplier, dramatically reducing the carbon emissions attributable to heating, lighting and general energy use.

As an event or promoter hiring a venue, you may have less control over energy management, beyond the type of equipment you bring into the space. In addition, communicating your preference about whether the building's supply is from a green tariff will have an impact – if enough clients ask, it may encourage a venue manager to consider changing. Conversely, a venue may require or encourage visiting productions to use energy efficient lighting rigs, or charge a premium for energy use above a given amount.

An Energy Performance Certificate (EPC) may also be a good idea for assessing the potential benefits of changes to the building such as insulation and ventilation management. Information about this can be found in the Quick Links section, as this guide is focussed on how we manage our operations within venues, rather than retrofitting buildings themselves.

What are we aiming for?

- Reducing the overall amount of energy used annually in the building.
- Switching to renewable energy supply.

Measures venue managers can take:

Switch to a renewable energy supplier or install renewable capacity

Perhaps the greatest impact you can have in reducing the environmental consequences of energy use, with require the least change, is to switch to a renewable energy supplier. The best options is to use a 100% renewable supplier such as Good Energy or Ecotricity, as they not only guarantee renewable energy, but invest in new capacity to meet demand. A second best option is to choose a green tariff from a major supplier. In this scenario, they are obligated to purchase or generate the equivalent energy to your consumption. In either case it is likely that the rates are slightly more expensive than standard tariffs, but combined with energy conservation measures, a venue may still see overall financial savings as well as considerable reduction in carbon emissions. For venue owners with investment capital it may be an option to install renewable capacity on the premises, benefiting from cheaper renewable energy in the medium to long term and the financial incentive provided by the national Feed in Tariff (FIT). For more information about this see the Quick Links section.

Heating

It may be useful to do a full review of the heating a cooling arrangement in the building to check the following with a view to saving energy:

- Is the heating is set to a sensible temperature? Do staff open windows for fresh air or because its to hot? It's OK to expect staff to wear a jumper at work rather than a T-Shirt!
- Are there periods of time when the building is not inhabited, when the heating could be turned down; such as audience spaces?
- Are energy-saving measures such as insulating behind radiators in place?
- Smart thermostats are becoming increasingly popular as the technology stabilises. Although they still come with a hefty price-tag, they are a sure way to make energy savings as they allow more localised control over building temperature.

Lighting – offices and stage

- Installing energy efficient lighting throughout the building is an investment which can pay off quickly with energy bill savings.
- Also consider energy efficient stage lighting – the reduction in energy consumption can be significant.
- Review whether all the lights are needed?

Appliances

- Choose low energy appliances, such as fridges and printers, when buying new. It's a good idea to use the Energy Star rating provided by the Energy Saving Trust.
- Consider what types of equipment are really needed – for example laptops use a fifth of the energy compared to a standard desktop³.
- Use timers to automatically switch off equipment that is definitely not needed for periods of time.

Organisational culture – switching off

Perhaps one of the easiest measures an organisation can take to reduce energy use is to work with staff to create a culture of energy conservation. A 'switch-off' campaign or policy can save significant amounts of wasted electricity. Promoting awareness through meetings, using signage, and sending email reminders can help staff to get into the habit. It can also form part of the job description of caretakers and building managers.

Measuring success

Ultimately, reductions in energy use are the indicator of success. For energy use, you can simply compare bills between years, but ideally you will be able to analysis in more detail where and how savings have been made, by keeping records. Conducting an annual review gives focus to successes and highlights where more work is needed. Using a carbon calculator will also help to assess reductions and help to communicate changes and successes with other staff successes with other staff.

Case study: WATT, Rotterdam

The 1,800 capacity club has achieved a 30% reduction in carbon emissions by installing low energy lighting and harvesting heat energy from amplifiers to provide warmth in other areas of the venue. The major feature is a dance-floor which generates electricity through the power of the dancers by an electro-magnetic

generator beneath their feet (piezoelectric generation). The owners claim that each clubber generates approximately 20Watts in an evening which generates enough energy to power the flashing LEDs in the dance-floor. Although this may seem like small-fry, the concept raises awareness of environmental issues amongst the clubbing community.⁴

Quick links

- **European Music Energy Efficiency Initiative:**
<http://www.ee-music.eu>
- **Julies Bicycle Practical Guide to Greening the Office:**
<http://www.juliesbicycle.com/files/Julies-Bicycle-Greening-the-Office-V8-2-18-11-14-web-3.pdf>
- **Feed in Tariff (FIT):**
<http://www.energysavingtrust.org.uk/domestic/content/feed-tariff-scheme>
- **General advice on energy management:**
<http://www.cse.org.uk>

³Source: Julies Bicycle Practical Guide to Greening the Office (2014) ⁴ <http://www.sassweb.ca/3bb3/crazy/just-dance-kinetic-energy>

4.3 Water

Safe water is becoming an increasingly scarce commodity globally, and whilst we have ready access to water supplies from the mains, there are more frequent periods of official 'drought' in the UK summer months. Water conservation is relatively easy for venues to achieve, but there are impacts associated with how we sell or serve water which are also important to consider.

Multiple studies have shown that bottled water produces between 10 and 97 times more greenhouse gas emissions than tap-water^{5,6}. Indeed the environmental impact of plastics has been increasingly in the public eye in recent years, leading to citywide bans of bottled water on public land; most notably San Francisco. Bristol-based RAW Foundation aim to reduce the use of plastic bottles by encouraging the use of re-usable bottles, and reducing the sale of water in disposable bottles. This reduces the emissions attributable to water consumption, and reduces the amount of waste which is produced.

What are we aiming for?

- Reduce water consumption, particularly unnecessary use of water.
- Reduce the impacts associated with providing water.

Measures event organisers can take to achieve this

- Use reduced flow taps such as sprinklers and/or timed release (push taps) to reduce water wastage when using taps.
- Consider water efficient, waterless, or dual flush toilets. Many older toilets can be retrofitted to use less water at very low costs by inserting a 'cistern displacement devise' (CDD) into the flush tank to reduce the volume of each flush by around one litre. This alone can save thousands of litres per year.
- Consider banning the sale of water in disposable plastic bottles on your premises/at your events; replace with re-useable cups or bottles.
- When purchasing new appliances such as dishwashers, check they are water efficient.
- Avoid water coolers due to the electricity used.

Quick links

- **Information about the impacts of plastics, RAW Foundation:**

<http://www.rawfoundation.org/raw-blue.php>

⁵ Dettore, C. 2009. Comparative Life-Cycle Assessment of Bottled vs. Tap Water Systems. Master's Thesis, University of Michigan, Ann Arbor: 1-68

⁶ Masoni, P. Proceedings of the SETAC Europe 17th LCA case study symposium. Sustainable lifestyles. Budapest, Hungary 28 Feb - 1 March 2011

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, 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.

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, and the long-term sustainability of our food system.

Bristol 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, have recently launched an online sustainable catering City & Guild accredited training course in partnership with the Sustainable Restaurants Association (SRA) to help traders in their approach and provide a recognised certification.

What are we aiming for?

- Local and seasonal produce where possible.
- Sustainably sourced fish and seafood.
- Use of ethical products in the workplace and for events, e.g. Fairtrade.
- Good welfare standards for meat and dairy, such as free range or organic.
- Healthy and delicious food!
- Locally sourced and/or organic drinks.
- Reduction of food waste.
- Reduction in waste associated with serving food and drink.
- Sustainable sourcing (all of the above) reflected in catering options for hired spaces.
- Using re-usable and recyclable materials used for serving food and drink.

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

Measures event organisers can take

Sourcing food

- Set a minimum standard for local, seasonal, and certified (e.g. organic) foods served in your venue.
- For events or markets managed by or in your venue, consider requiring catering stalls to meet a minimum standard and prioritise local traders offering local produce.
- Communicate your policy of 'healthy, delicious, local and sustainable food' to staff and customers.
- Have a policy on products used in shared spaces, for example Fair Trade coffee in staff rooms or kitchens.
- Choose sustainable restaurants when organising staff meals.

Sourcing drink

- Consider local breweries for beer – there are many new micro-breweries in Bristol to choose from!
- Source soft drinks from organic or local suppliers.

Reducing food waste and disposables

- Work with your catering team or manager to reduce food waste.
- Find an organisation that can take edible left-over food.
- Use reusable, washable cups (glass or plastic) on bars where appropriate.
- Reduce disposable plastics from drinks sales on bars by bulk dispensing rather than serving cans or bottles.



Figure 5: Examples of compostable serve-ware.

Well known certifications to consider:



- If disposables are the only option for serving food for any reason, use compostable serve-ware 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.

Quick links

- **Good Food for Festivals Guide (2013) published by Sustain:** http://www.sustainweb.org/publications/good_food_for_festivals_guide/
- **A Good Food Plan For Bristol (2014) published by Bristol Food Policy Council:** <http://bristolfoodpolycouncil.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

4.5 Waste

The way that waste is managed and the types of products which become waste are a significant part of a venues environmental performance.

Waste costs money to deal with, so the ideal scenario is to avoid it in the first place. But if it can't be avoided then managers should seek to re-use or recycle. The European

waste hierarchy shown below is a widely accepted best practice approach to 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.

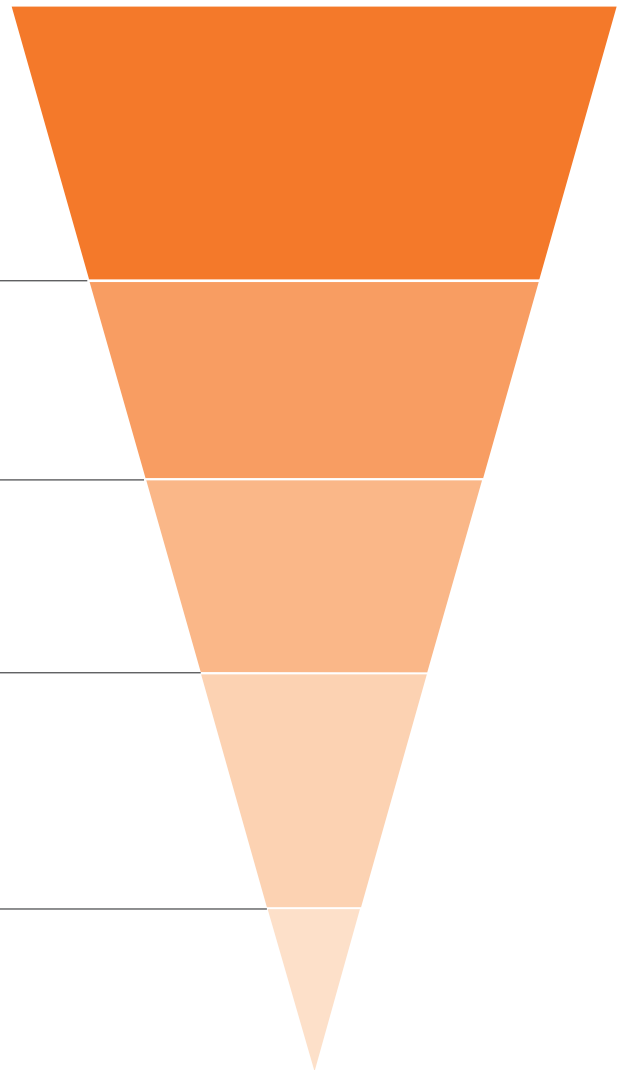


Figure 6: The European Waste Hierarchy with description of each stage.

Types of waste in venues

Dealing with mixed waste is becoming increasingly expensive due to the high costs of disposal and the ever increasing landfill tax. Table 1 lists some commonly

occurring waste items and suggests how they should be disposed of in the most environmentally responsible way.

Material	Source	Opportunities for resource efficiency
Metals	Beverage cans and food containers.	Can often attract a rebate, and worth a considerable sum if aluminium and steel are kept separate.
Plastics	Packaging material, beverage bottles and take-away cups.	Check with your contractor which types of plastic they can accept. If they can't accept a certain type then consider changing the material your food is served in.
Glass	Beverage bottles from bars and cafes, jars and bottle from kitchens.	One of the most commonly recycled materials. Can often save more money if colour separated.
Paper	Mainly from offices but also from leafleting activities.	Check with your contractor about separating different grades as this can increase the value of material.
Cardboard	Mainly from deliveries of products.	Bulky but easy to segregate and widely recycled. Can be compacted for efficient use of space. Avoid contamination with food or glass.
Wood	Usually used in set design, staging, exhibition construction and temporary fit out.	Many third sector recycling organisations (wood recycling projects) will collect waste wood material for re-purposing or making into firewood.
'Biodegradable' or compostable serve-ware.	Food service areas and bars.	<p>The most sustainable solution for serving food and drinks is to use washable crockery. Where this is not possible, and disposable 'serve-ware' is necessary, it's important to choose materials which can be recycled or disposed of in the most environmentally responsible way available.</p> <p>Plates and cups which have come into contact with food, often cause problems for recyclers as food, moisture and especially oils are difficult for reprocessors to remove.</p> <p>A possible solution to this problem is to choose 'compostable serve-ware' to serve food and drinks. In certain circumstances, this can be added to your food-waste and sent for composting at a specialist facility. NB: this will not work with systems that use Anaerobic digestion (composting without air).</p> <p>It's important to label waste collection containers carefully to avoid contamination.</p> <p>Unfortunately not many systems exist in the UK which can accept this mix of materials, check carefully with your contractor to make sure they are dealing with the material responsibly.</p> <p>Compostable plastics can often cause problems when mixed when they are unintentionally discarded in bins designated for conventional plastics. It is not recommended to use these unless you're sure you can keep them separate.</p>

Material	Source	Opportunities for resource efficiency
Food waste	From food service operations, drinks preparation or staff catering.	Causes very high impacts when sent to landfill and huge impacts resulting from its production, transportation and storage. Avoid wastage as much as possible but otherwise work with a local contractor to make sure material is sent for either composting or anaerobic digestion.
Oil and fat	Arises in kitchens and food service areas.	Should not be poured down the sink. Use a specialist contractor who will take it away and turn into biodiesel or pet-food. Ask if they'll provide a rebate as oils are worth an increasing amount of money in bulk.
Textiles	Lost property.	Collections from local charities are easy to arrange as second-hand clothes have a surprisingly high value.
Electrical equipment	Computers and printers from offices, other materials arising in technical areas.	Can often be sent directly to specialist charity collectors who will re-purpose or refurbish items for resale. Otherwise they should be dealt with by a specialist contractor as they are covered under the WEEE regulations. Most white goods and computer equipment are classed as hazardous and must be disposed of by a specialist contractor.
Batteries, printer cartridges	Arise from technical areas and offices.	Widely recycled through specialist contractors
Plasterboard	Building works, temporary fit-out, stage sets.	Gypsum plasterboard produces toxic gasses when it comes into contact with biodegradable waste in landfill. Therefore it must be kept separate and disposed of by a specialist contractor.
Hazardous waste	Most electrical equipment fluorescent bulbs, batteries, some paint and varnishes (small amounts in the bottom of a tin can class it as hazardous).	Disposal of hazardous waste is tightly regulated. Make sure that you use a specialist contractor to dispose of items safely.
Healthcare waste	Usually form medical or first aid rooms.	All medical; waste must be stored securely, transported and disposed of by a specialist contractor. There are three main types which should be kept separate as the disposal costs are different:
Sanitary waste	Usually arises in the sanitary bins provided in female toilets.	In theory this material can be disposed of in landfill with any other waste but is often collected separately as it is considered 'offensive'.

Table 1: Summary of waste items which may arise in event venues and some of the opportunities to dispose of them responsibly.

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 venue managers can take

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

Compared to events held in the outdoors, indoor venue managers have a unique opportunity to operate a controlled waste system whereby the input materials are carefully managed, so that when they become waste they can be easily segregated and then taken to the facility with the least environmental impact. The waste receptacles which are used by your staff and visitors should be tailored carefully to the products which are on sale; this will make sure that the people using them carry out waste separation at source rather than having to carry out costly sorting later on.

Figure 7 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.

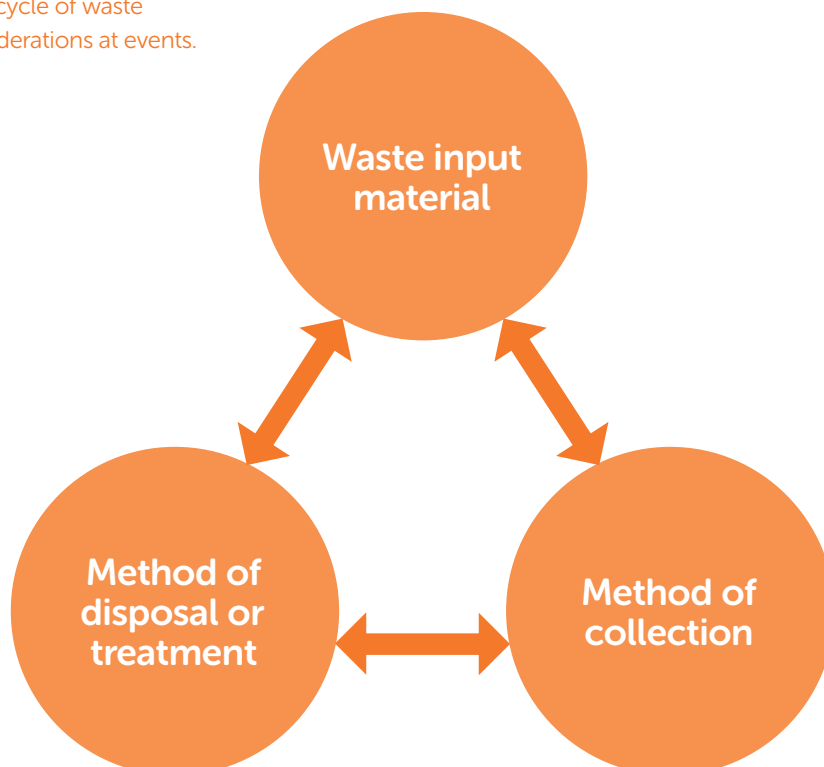
Functional areas

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

Public domain: dance-floor, chill-out area, bar, restaurant

These are the public areas of your operation that will best communicate your environmental credentials with the audience. Much of the waste generated in these areas will be managed by your staff members. Ensure that they segregate packaging / serve-ware as they collect material. Separating into two bags (one for recycling and one for mixed waste) is often the most efficient method; staff will require training to identify what to put in each bag and this will need to be joined up with the materials which your contractor has told you they want.

Figure 7: Simplified cycle of waste management considerations at events.



If you have bins in the venue then 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 venue.

Back of house

These are ideal areas to segregate waste effectively as they are under your control. Significant financial savings can be made by segregating recyclables rather than mixing everything together and incurring high disposal charges.

- Display clear signage on both the sides and tops of the bins.
- Make sure facilities are appropriate to the waste being generated:
 - Bars may produce a lot of glass behind the scenes;
 - Most food service areas and bars will produce cardboard;
 - Restaurants may (unsurprisingly) produce lots of food waste!
- Make sure that staff are adequately trained and that the system is constantly updated.

Technical

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.

Offices

In terms of waste, offices tend to produce very little, however it’s important to tackle every area as nationally the figures add up.

- Much of the waste generated in offices is paper. Consider running a paperless office, any paper that comes in from outside can be scanned and the paper recycled.
- If you can’t go paperless then put a paper recycling bin next to every desk.

Productions/shows

- Bespoke productions can often create waste due to scenery sets and overlay construction.
- It’s important to engage with the people responsible to ensure that they have a plan for how to deal with all the materials they’re using before they become waste.
- Encourage re-use of materials as far as possible.
- If using external contractors then make sure they deal with waste responsibly as part of their contract.

Quick links

- **Julie’s Bicycle Indoor Events Waste Guide:**
<http://www.juliesbicycle.com/resources/waste-management-in-buildings-guide>
- **More info on clinical waste segregation:**
<http://www.phswastemanagement.co.uk/information-centre/clinical-waste-segregation-and-colour-coding>

- **Advice on legal responsibilities when managing commercial waste:** <https://www.gov.uk/managing-your-waste-an-overview/contact-the-environment-agency>
- **WRAP guide to facilities management and waste:** <http://www.wrap.org.uk/category/sector/facilities-management>
- **Guidance on the waste hierarchy:** <http://wastehierarchy.wrap.org.uk/>

4.6 Purchasing

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

What are we aiming for?

- Avoiding unnecessary use of materials and resources.
- Sustainable sourcing of materials used in construction, e.g. Forest Stewardship Council (FSC) timber.
- Use energy efficient equipment such as LED lighting and Energy Star rated appliances.
- Hire and/or re-use equipment where possible.
- Reduce the travel associated with delivery and collection of materials and supplies.

Measures venue managers can take

Office materials and printing

- Use recycled, un-chlorinated paper and card.
- Choose a printer which is efficient in its ink consumption, and have an office policy of printing on the draft/grey setting for internal documents or drafts.
- Print double sided where possible – it halves paper usage!
- Add to your company email signature 'think before you print' or similar.
- Donate used printer cartridges to a charity – there are many charities who collect and raise funds by doing so.

Lighting, sound and visuals

- Consider LED stage lighting for both permanently installed or hired uses to reduce energy demand.
- Opt for rechargeable batteries for microphones and stage equipment.

Materials – set design

- 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.
- Where possible work with companies who manage their company and operations sustainably, as this is a 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/>
- **Scenery Salvage Ltd:**
<http://www.scenerysalvage.com/home/>
- **The Better Batteries Campaign:**
<http://www.juliesbicycle.com/resources/better-batteries-guide>
- **Julie's Bicycle Creative Industry Green tool:**
<http://www.juliesbicycle.com/services/industry>

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, contactors, licensing authorities and 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.

The arts has a unique capacity to inspire, and arts venues can play a valuable role in the climate change conversation with their audiences by communicating their commitment and successes. This can be done in promotion, and in the venue, where signage can both help to reduce impacts such as water or energy use, and demonstrate the measures you have put in place. Finding innovative ways to have climate related conversations with audiences could form part of the artistic vision of the venue, providing a guiding theme for commissioned work as part of an environmental policy, or simply a creative approach to venue signage and communications strategy.

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.
- Once you have information 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>

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 the next year?

2. Planning and implementation

Travel – staff and audience

- Do you have a plan to encourage sustainable travel for staff?
- Are you providing a bike parking area for staff and/or audiences?
- Have you provided clear travel information to your audience?

Energy

- Have you made an assessment of energy use in your building?
- Have you explored switching to a renewable provider or green tariff?
- Do you have a plan to reduce energy consumption in the venue?

Water

- Are you using water saving taps?
- Have you put measures in place to reduce toilet flush water?
- Will you offer tap water, and avoid sales of water in bottles?

Purchasing

- 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 in your venue?
- Do you have a policy or document to communicate this with staff and traders?
- Are you using compostable serving containers (if you use them)?

Waste

- Are you reducing the amount and number of types of waste in the building?
- Are you recycling materials which are no longer needed?
- 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 improving sustainability?
- 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?

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/>
- **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>

Purchasing

- **Julies Bicycle Practical Guide to Greening the Office:**
- <http://www.juliesbicycle.com/files/Julies-Bicycle-Greening-the-Office-V8-2-18-11-14-web-3.pdf>

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.faresharesouthwest.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:**
<http://www.wrap.org.uk/content/rippleffect-water-efficiency-businesses>
- **Sustainable Event Management: A Practical Guide, Meegan Jones, Routledge, 2014.**
- **Love Your Tent campaign** <http://loveyourtent.com>
- **Making Waves: Plastic Free Festival Guide, Raw Foundation & Kambe Events (2014):**
<http://kambe-events.co.uk/campaigns/making-waves/>
- **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)**

Acknowledgements

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 festival industry 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.

