# Julie's Bicycle





Total score 77/100

42/45 Commitment 12/15 Understanding 23/40 Improvement

Carbon footprint 2015/16

# 383 tonnes CO2

Equal to 867 flights from London to NYC

# Environmental Highlights

Energy	<ul> <li>Absolute energy use has decreased by 3% relative to 2014/2015.</li> <li>Relative (per performance) energy use has increase very slightly in the last year, but remains 43% below the baseline year.</li> </ul>
Waste	<ul> <li>The Young Vic have continued to use First Mile as their waste managers, meaning that relative waste production is still 62% below the baseline. Although, absolute waste generation has increased.</li> </ul>
Water	• This year has seen large reductions absolute and relative (per attendance) water use by 23% and 13% respectively.
Business Travel	• Business travel has increased by 240%, due to a production in New York. However, it is still 30% below the baseline (2011-2012)





# About Young Vic

The Young Vic opened in 1970 as a space for younger directors, designers, actors, writers and technicians could work alongside the world's great theatre artists. With four performance spaces and a total capacity of around 700, the Young Vic is classed as a medium sized venue. This year saw an attendance of 150,000, compared to 170,000 in 2014-2015, due to a reduced number of performances. These factors are taken into account when calculated relative environmental impacts in this years Creative Green assessment.



# About Young Vic's Certification

The Young Vic has been awarded a 4 star Creative Green rating in recognition of its commitment and achievement in embedding environmental sustainability in its operations and activities, following assessment and environmental data analysis by Julie's Bicycle. It has particularly excelled in the commitment and understanding sections of the assessment.

This is the Young Vic's sixth Creative Green certification and the first under the revised methodology and 1-5 star rating, which was introduced in 2016. Under the previous methodology, the Young Vic achieved a maximum 3 star rating for the first time in 2014-2015.

Full details of the assessment and scoring and data analysis upon which the star rating is based are provided in the completed Creative Green assessment form.

Creative Green was developed by Julie's Bicycle to recognise environmental commitment and achievement in the creative sector – venues, events and offices. On average 35 organisations have been certified each year since it was launched in 2009. Find out who else is currently certified at http://www.juliesbicycle.com/services/industry/whos-certified.

# Julie's Bicycle Young Vic Scored 42/45 for Commitment



Commitment is assessed based on:

- environmental policy and action plan
- integration of environmental sustainability in broader business mission, strategy or planning
- environmental responsibilities
- environmental procurement and sourcing
- stakeholder communications and engagement



Highlights	Recommendations
<ul> <li>A clear environmental policy and departmental action plans setting out areas of impact, targets to reduce those impacts and the strategy for achieving their aims.</li> <li>Successful in securing ACE capital grant to improve the energy efficiency of the theatre, particular by upgrading lighting to LED.</li> <li>The Young Vic's series of productions, 'Classics for a new climate', allow sustainability to become a central part of productions that do not already have an environmental theme. 'La Musica', ran with half the carbon budget of other productions of similar size.</li> <li>Sustainable procurement is evident - including office supplies, catering and waste management. Strong partnership established with The Cut restaurant/bar.</li> <li>Strong communication of environmental impacts and targets among staff, in the form of a quantified carbon budget which is compared to previous years.</li> <li>Taking a sector leader role by actively sharing practice and learning.</li> <li>Staff engagement in sustainability is linked to wellbeing initiatives such as gardening and</li> </ul>	<ul> <li>The policy would be further improved if including the context and broader mission of the Young Vic, in its relationship to arts, the local community and its leadership on the sustainability agenda.</li> <li>Use a green rider when touring productions. If doing work - especially internationally use the opportunity to share practice and learning with host theatre and creative teams.</li> <li>The action plan focuses on day-to-day operations-extend to include actions focused on strategic organisational development.</li> <li>Formalise your commitment to sustainable procurement in the form of a documented procurement policy.</li> <li>Take advantage of the Arts Basket energy procurement tender to select an energy supplier with a green electricity tariff of high integrity.</li> <li>Improve efforts to incentivise sustainable practise amoung stakeholders, particularly audience members and the local community. Can active participation in sustainable initiatives be encouraged? E.g. An engagement project examining local air quality.</li> </ul>





# Young Vic Scored 12/15 for Understanding

Understanding is assessed based on:

- breadth and depth of understanding of environmental impacts
- extent to which environmental data is used inform action and track progress in reducing impacts

The Young Vic scored 13/15 for Understanding due to its in-depth understanding of both its direct and indirect environmental impacts. At least four years of data exist for all measurable impacts.

Direct impacts measured	2009	2010	2011	2012	2013	2014	2015
Energy use							
Water use							
Wastewater volumes							
Waste generation							
Production travel							
Indirect impacts measured	2009	2010	2011	2012	2013	2014	2015
Audience travel							



Highlights	Recommendations
<ul> <li>Environmental impacts are not only measured, but also analysed. Carbon budgets are quantified, compared and shared weekly.</li> <li>The Young Vic record all out-of-London business travel.</li> </ul>	<ul> <li>Undertake an in depth electricity audit to assess the performance of the energy efficiency upgrades. Analyse 30-minute electricity data.</li> <li>Consider carrying out staff (include The Cut staff) environmental attidudes survey to help inform engagement and communications campaigns.</li> <li>It is clear that set materials are recycled and reused, but it may be useful to obtain quantitative</li> </ul>
<ul> <li>Measuring resource use has identified areas of potential improvement. For example, monitoring of the air handling system led to lasting improvements.</li> </ul>	<ul> <li>data on material use to help set targets.</li> <li>Continue the great work with carbon budgets.</li> <li>Consider running audience and business travel.</li> <li>Consider running audience environmental attitudes survey to develop content and campaigns with audiences on Young Vic's programming and operations.</li> <li>Undertake a supplier inventory to identify further opportunities for green procurement.</li> </ul>





### Young Vic Scored 23/40 for Improvement

Improvement is assessed based on:

• quantifiable reductions in direct environmental impacts, i.e. impacts over which an organisation has direct control such as energy use and waste generation, both total and relative impacts

• actions to address indirect environmental impacts, i.e. impacts over which an event has limited or no direct control, such as audience travel

• points are awarded for reducitons in absolute impacts and relative impacts, which account for changes in venue size, performance numbers and attendance.

This year, the Young Vic has achieved decreases in absolute energy use, energy related emissions and water. Howevever absolute waste production and business travel has increased.

Relative impacts have also decreased for all impacts relative to the baseline, however relative energy use and relative waste production have increased since 2014-2015. Relative water use shows the greatest improvement, and has decreased by 13% since last year.

Relative energy use, and energy related emissions are normalised by performance number. Relative waste production and water use are normalised by attendance (tickets sold).

Business travel has increased by 240% compared to 2014-2015. Howerver this year may be an anomaly because of the production of 'A View From The Bridge' in New York.

	Unit	Baseline year 2011/2012*	Previous year 2014/2015	Current year 2015/2016	% change current vs previous	% change current vs baseline
Mains electricity	kWh	577,765	560,313	553,650	-1.2%	-4.2%
Mains gas	kWh	461,686	397,675	356,542	-10%	-23%
Energy use emissions (all sources)- absolute	tonnes CO2e	393	391	362	-7.3%	-7.8%
Energy use emissions (all sources) - relative	kg CO2e per m2	2,427	1,497	1,480	-1.2%	-39%
Water use - absolute	m3	3,993	3,867	2,973	-23%	-26%
Water use - relative	litres per attendance	31	23	20	-13%	-36%
Waste generation - absolute	tonnes	101	37	46	22%	-55%
Waste generation - relative	kg per attendance	1	0.2	0.3	38%	-62%
Total business travel related emissions - absolute	tonnes CO2e	24	4.9	17	244%	-30%
Total business travel related emissions - relative	kg CO2e per employee	0.5	0.1	0.3	244%	-30%

#### Environmental impact trends (based on direct and indirect impacts)

\*The baseline year for business travel is 2012-2013.

hul	ie's	Bicvcle
SUSTA	INING CRE	ATIVITY / CIC



Highlights	Recommendations
<ul> <li>Absolute impacts have been reduced in all areas apart form waste production and business travel.</li> <li>Water use has shown the greatest improvement among relative impacts, with a 13% decrease from last year.</li> <li>All relative impacts are at least 30% lower than the baseline year.</li> </ul>	<ul> <li>Develop a roadmap of energy behaviours, efficiency and innovation that will enable the Young Vic to achieve the London 2025 target. Identify what is feasible to implement and how it can be financed.</li> <li>Focus the roadmap on addressing absolute electricity usage and how associated emissions can be improved.</li> <li>Continue using the data feedback looks to keep up the positive trends in water use and energy use emissions.</li> <li>Set a carbon offset policy for unavoidable air travel.</li> </ul>





## Your Impacts and Performance in Numbers

This section provides further detail on your direct and indirect environmental impacts and how they have changed over time, covering both increases and decreases. Its aim is to support you to:

- track and understand performance over time
- identify where you are doing well and areas for further improvement

Carbon footprint	Unit	Baseline year 2011/2012	Previous year 2014/2015	Current year 2015/2016	% change current vs previous	% change current vs baseline
Electricity	tonnes CO2e	283	301	277	-8%	-2%
Gas	tonnes CO2e	110	90	85	-5%	-22%
Water	tonnes CO2e	1.4	1.3	1.0	-23%	-26%
Waste water	tonnes CO2e	2.8	2.7	2.1	-23%	-26%
Landfill waste	tonnes CO2e	20	0.0	0.0	-	-100%
Recycled waste	tonnes CO2e	1.2	0.8	0.7	-5%	-38%
Business travel	tonnes CO2e	No data in 2011/2012	4.9	17.0	244%	-30%
Total carbon footprint	tonnes CO2e	419	401	383	-4%	-8%
Total relative carbon footprint	performance	2584	1535	1566	2%	-39%

#### Carbon footprint trends (based on direct and indirect impacts)









The Young Vic's energy use comes from gas and electricity. Both of these resources have been reduced in absolute terms, however relative (per performance) usage has increased. This increase is small relative to the overall reduction of energy consumption between the baseline year and the current year. The Young Vic have been successful in keeping energy use stable this year, and should aim for a reduction in relative energy use in 2016-2017.

Absolute electricity use alone appears to be relatively stubborn, although relative usage does show a decline



Energy use	Unit	Baseline year 2011/2012	Previous year 2014/2015	Current year 2015/2016	% change current vs previous	% change current vs baseline
Energy use (electricity and gas) - absolute	kWh	1,172,378	1,046,316	1,016,469	-2.9%	-13.3%
Electricity	kWh	577,765	560,313	553,650	-1.2%	-4.2%
Gas - weather normalised	kWh	594,613	486,003	462,819	-4.8%	-22.2%
Energy use (electricity and gas) - relative	kWh per performance	7,237	4,009	4,151	3.5%	-42.6%
Electricity	kWh per performance	3,566	2,147	2,261	5.3%	-36.6%
Gas - weather normalised	kWh per performance	3,670	1,862	1,890	1.5%	-48.5%







Energy consumption - kWh

Relative energy consumption - kWh per performance









Energy related emissions tell a similar story to energy use, but show a small decrease relative to 2014-2015. Relative energy use emissions are 39% below the baseline.

Gas and electricity related emissions are also compared to the Julie's Bicycle benchmarks. The Young Vic's gas emissions are far below the benchmark, however electricity is slightly high. It is recommended that the Young Vic make it their target to reduce electricity related emissions below the JB benchmark.

Energy related emissions	Unit	Benchmark year 2011/2012	Previous year 2014/2015	Current year 2015/2016	% change current vs previous	% change current vs baseline
Energy use emissions (all sources)- absolute	tonnes CO2e	393	391	362	-7%	-8%
Energy use emissions (all sources) - relative	kg CO2e per performance	2,427	1,497	1,480	-1%	-39%









Relative energy related emissions - kWh per performance









Water

The Young Vic's water usage has shown the most impressive improvements. Both absolute and relative usage have decreased, with a notable 13% reduction in relative water use since last year.

Despite the good reductions, relative water use is still slightly above the Julie's Bicycle benchmark. The Young Vic should aim to be below the benchmark in 2016/2017.

Water and wastewater							
Water use	Unit	Benchmark year 2011/2012	Previous year 2014/2015	Current year 2015/2016	% change current vs previous	% change current vs 2011	
Water use - absolute	m3	3993	3867	2973	-23%	-26%	
Water use - relative	litres per attendance	31	23	20	-13%	-36%	









#### Water benchmark comparison - litres per m2







Waste is the only impact to show significant increases in both absolute and relative terms. This may be partly because the previous year had an anomalously low waste production.

Despite these increases, waste production is still well below the baseline. It is important, however that the Young Vic make every effort to keep to the high standards they set in 2014-2015.

Waste								
Waste	Unit	Baseline year 2011/2012	Previous year 2014/2015	Current year 2015/2016	% change current vs previous	% change current vs baseline		
Waste generation - absolute	tonnes	101	37	46	22%	-55%		
Waste generation - relative	kg per attendance	0.8	0.2	0.3	38%	-62%		
Landfill waste	tonnes	44	0	0	仓	-100%		
Recycling	tonnes	57	37	36	-5%	-38%		
Energy from waste emissions	tonnes CO2e	0	0	0.21	-	-		

















Business travel has increased by 244% between 2014-2015 and 2015-2016. This large increase is due to the production of 'A View From The Bridge' which required longhaul flights to New York. Business travel is often difficult to reduce, and can vary largely year on year. It is recommended that the Young Vic make realistic targets for business travel, taking into account expected overseas travel.

This year, business travel accounted for 17 tonnes of CO2e (4.4% of the Young Vic's carbon footprint).

Business Travel						
Business travel related emissions	Unit	2011/2012	Previous year 2014/2015	Current year 2015/2016	% change current vs previous	% change current vs 2011/2012
Total business travel related emissions - absolute	tonnes CO2e	24	4.9	17	244%	-30%
Total business travel related emissions - relative	kg CO2e per employee	0.5	0.1	0.3	244%	-30%
Car - average (person per	pkm	315	0.0	0.0	-	-100%
	tonnes CO2e	0	0.0	0.0	-	-100%
Train - national	pkm	12,835	1,687	630	-63%	-95%
	tonnes CO2e	1	0.1	0.03	-63%	-95%
Taxi - regular	pkm	647	0	0	-	-100%
	tonnes CO2e	0	0	0	-	-100%
Flight - shorthaul	pkm	38,890	22,872	26,042	14%	-33%
	tonnes CO2e	6	3.8	4.3	14%	-33%
Flight - longhaul	pkm	112,906	6,918	82,984	1100%	-27%
	tonnes CO2e	17	1	13	1100%	-27%





#### Business travel emissions - tonnes CO2e



#### Business travel emissions - kg CO2e per employee





### Glossary

#### Direct and indirect environmental impacts

Direct environmental impacts are impacts over which an organisation has direct control or influence, and generally relate to activities for which an organisation pays itself, as the best indicator of the level of control or influence. Under Creative Green the most common direct impacts are:

- Energy use
- Energy use emissions
- Waste generation
- Water use and waste water generation
- Production travel and transport emissions
- Business travel emissions
- Paper use

Indirect environmental impacts are impacts over which an organisation has limited or no control or influence and generally relate to activities for which an organisation does not pays itself. Under Creative Green, audience travel and staff commuting are the most common indirect impacts. While an organisation can take some action to provide or promote more sustainable travel alternatives to its audiences or employees, there are limits to what it can do e.g. a venue or an event cannot move location simply to reduce audience travel or staff commuting.

#### Absolute and relative impacts

Environmental impacts are expressed in both absolute terms, e.g. total litres of diesel used per year, total tonnes waste generated per year, and in relative terms. Relative impacts are established by dividing the impact reported (e.g. tonnes of waste or emissions) by an appropriate activity metric to provide a measure of the intensity of resource use or impact and also to allow comparability over time and across different sized organisations. So, for example, if a venue extends its building, a festival increases its audience capacity, or an office takes on more staff, different metrics such as m<sup>2</sup> of floor area, audience day or Full Time Equivalent employee can be used to enable comparisons over time and against sector averages. The resulting relative indicator e.g. kg of waste per audience day or kWh electricity per m<sup>2</sup>, is an intensity ratio.

#### Weather normalisation

Gas use emissions are calculated using weather normalised data. This means gas use consumption is adjusted to take account of fluctuations in weather year-to-year. We do this by calculating consumption compared to the average weather conditions. We convert this weather normalised consumption into carbon emissions. This means the carbon footprint used to calculate your Creative Green score will not penalise or be overly generous because it is a cold or mild winter.

#### Benchmarks

Julie's Bicycle has developed a set of benchmarks to help organisations compare their environmental performance against the industry average for venues/cultural buildings, offices and outdoor events. All benchmarks have been developed using data collected by Julie's Bicycle through Creative Green certifications, Creative IG Tool accounts and partner organisations from across the creative and cultural sector. Further information is provided <u>here</u>.

I





#### **Carbon footprint**

A carbon footprint is a measure of the climate change impact of a product, country, person, company etc. in terms of greenhouse gas emissions, measured in units of carbon dioxide equivalent  $(CO_2e)$ .  $CO_2e$  emissions are calculated by applying a carbon conversion factor to, for example, kilowatt hours (kWh) of electricity and gas used, litres of water used, tonnes of timber used, tonnes of waste to landfill.

#### Carbon dioxide equivalent (CO<sub>2</sub>e)

There are seven main greenhouse gases and different activities, such as energy generation and waste disposal, create different types of greenhouse gases, but each one has a different global warming potential. For example, methane's global warming potential is 20 times greater than carbon dioxide ( $CO_2$ ), per unit of gas. To deal with this, scientists use carbon dioxide equivalent ( $CO_2e$ ) as a common denominator for the main greenhouse gases so they can express the climate impacts in a single measure.

#### **Conversion factors**

We apply the conversion factors of the year in question to the data of the year in question, using the official UK conversion factors provided at <a href="http://www.ukconversionfactorscarbonsmart.co.uk/">http://www.ukconversionfactorscarbonsmart.co.uk/</a>. These factors are updated on an annual basis. The most up-to-date list of UK conversion factors used is provided for download on the <u>Creative IG Tools</u>.

The UK Government GHG Conversion Factors are annually updated with emissions factors and should be used to report on UK emissions. If we have not been able to provide the appropriate emission factor for your activity data or you have overseas operations, we you should refer to the emissions factors in the GHG Protocol calculation tools." You will need to take the international electricity factors from the <u>Greenhouse Gas Protocol</u>.



### Relevant Standards and Tools

• Department of the Environment, Food and Rural Affairs (DEFRA) <u>Environmental Reporting</u> <u>Guidelines: Including mandatory greenhouse gas emissions reporting guidance</u>

• DEFRA UK greenhouse gas conversion factors

• World Resources Institute (WRI) and World Business Council on Sustainable Development (WBCSD) <u>Greenhouse Gas Protocol</u>

### About Julie's Bicycle

Julie's Bicycle is a leading global charity bridging the gap between environmental sustainability and the creative industries. Our vision is a creative community with sustainability at its heart and our mission is to provide the inspiration, expertise and resources to make that happen. We work with over 1,000 arts organisations across the UK and internationally, large and small to help them measure, manage and reduce their environmental impacts.

Contact E: <u>info@juliesbicycle.com</u> T: 020 8746 0400 <u>www.juliesbicycle.com</u> Tweet us: @juliesbicycle #CreativeGreen

### About Creative Green

Creative Green is the environmental certification scheme for the creative sector – venues, events and offices. Its purpose is threefold:

recognise commitment and achievement

provide organisations with a means of tracking their journey of change and performance over time inspire organisations to do more

Creative Green provides organisations not only with a means of demonstrating their environmental commitment to their audiences and communities but also the opportunity to be part of a creative community which shares the same commitment, and which, given its role in shaping and building culture, identity, communities and values, has the potential to drive the kind of transformational change we need to live within the limits of our planet.

Find out more about Creative Green here.



