

2024

Carbon Emission Report

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The world's most sustainable touring exhibitions

Nomad recognises that the design and touring exhibitions industry has an important and urgent responsibility to adapt to ensure we collectively protect our planet from the devastating effects of climate change.

The 2015 Paris Agreement set out a central goal to limit global temperature rise to 1.5 degrees Celsius, or a maximum of 2 degrees Celsius above pre-industrial levels by mid-century. It is clear that this target cannot be achieved by relying solely on governmental action and that we all need to change our behaviour to work towards a climate neutral world.

Exhibition production has traditionally relied on materials that have high levels of embodied carbon and cannot be recycled, high rates of waste to landfill, and large volumes of freight with a reliance on air transportation. Nomad Exhibitions was created to counter these issues and operate a new model of sustainable touring exhibitions.

Nomad was one of the first arts organisations in the world to sign up to the UN Climate Neutral Now initiative in 2020; that pledge signified our objective to participate in efforts to tackle climate change and we hoped to also set a precedent for others in the industry to make similar commitments.

Our own commitment is to comprehensively evaluate the full life cycle of each touring exhibition we produce, and the operations of our company, by meticulously measuring Scope 1, 2 and 3 greenhouse gas emissions.

Until recently we have published this data annually on the Climate Neutral Now platform. At the end of our 2023 year, and with the winding down of the Climate Neutral Now programme, that reporting will now be carried out through SME Climate Hub.

Measuring is only the first step in our process and more importantly we are fully committed to reducing emissions throughout all activities, and compensating for any emissions that cannot be avoided through carbon mitigation programmes and charitable donations.

Nomad's unique sustainable exhibition design approach is based on the principles to reduce, recycle and reuse. We reduce through designing and making our exhibitions with modular components and material selection that ensures we can operate a zero waste and zero landfill policy throughout exhibition tours. Our exhibitions also pack into lower volumes and at lighter weights than typical touring exhibitions so our touring logistics have a lower climate impact.

Nomad are also reducing our use of airfreight as a means to transport our exhibitions, using road, rail and sea transport wherever we can. We recycle all components of our exhibitions that have reached the end of their life, and we choose materials in our productions that can be recycled through the most energy efficient processes.

The modular design approach to our exhibition systems, and their inherent robustness, ensures that we can continually reuse components in new productions until they reach the end of their life.

Emissions mitigation policy

Nomad accepts that off-setting as a means to compensate for our measured GHG emissions is contentious and problematic. In acknowledging this we have created our own three-step methodology that ensures our carbon footprint is fully measured and realistically mitigated.

The first step is to evaluate our emissions footprint by tracking our activities throughout the year and accounting for these emissions in the most comprehensive way possible; for example, in our transportation calculations we use a well-to-wheel calculation methodology, and for the audio visual hardware we acquire we allow for full life cycle embodied carbon.

The second step involves us calculating the equivalent cost of our total emissions at a value £100 per tonne of CO₂e, as recommended by Arts Council England and Julie's Bicycle.

The third step is to mitigate our emissions, at the financial value calculated through step two, by providing services annually in partnership with not-for-profit organisations working in carbon reduction sectors. This approach aligns with, and was inspired by, studies on Strategic Climate Funds carried out by the Gallery Climate.

Since January 2022 we have worked in partnership with SolarAid who provide solar lights to sub-Saharan African communities to achieve this aim. Through this partnership we provide SolarAid with in-kind support, exhibition materials and design services to help promote their work.

We readily acknowledge that we still have a lot to do and are continually learning how we can work better and more efficiently. We are also committed to learning from and sharing our own knowledge with our partners, and the audiences to our exhibitions wherever we can.

Strategic Climate Fund support for SolarAid

Established in 2006, SolarAid is a UK based, international charity that combats poverty and climate change. Through its social enterprise, SunnyMoney, they are working with entrepreneurs, schools and clinics to distribute solar lights to people living without electricity in Zambia in Malawi.

SolarAid's vision is of a world where everyone has access to clean, renewable, energy. Yet today, 578 million people in sub-Saharan Africa lack access to electricity. This forces people across the continent to cut their day short at around 6pm, with many relying on expensive, toxic and dangerous lighting sources such as candles and kerosene lamps. This unacceptable situation has a negative impact on every facet of life, trapping people in poverty. Children cannot study and do their homework in the dark. Kerosene flames are harmful to people's health. Lack of light and electricity make it harder for people to make a living. Burning fossil fuels just to see at night also harms the environment.

The most pressing issue, however, is safety. Too many people risk their lives every single night, by relying on candles and rudimentary kerosene lamps, just to light their homes.

SolarAid's mission is to light up every home, school and clinic in Africa by 2030, using safe, clean, solar power. No one should be left in the dark.

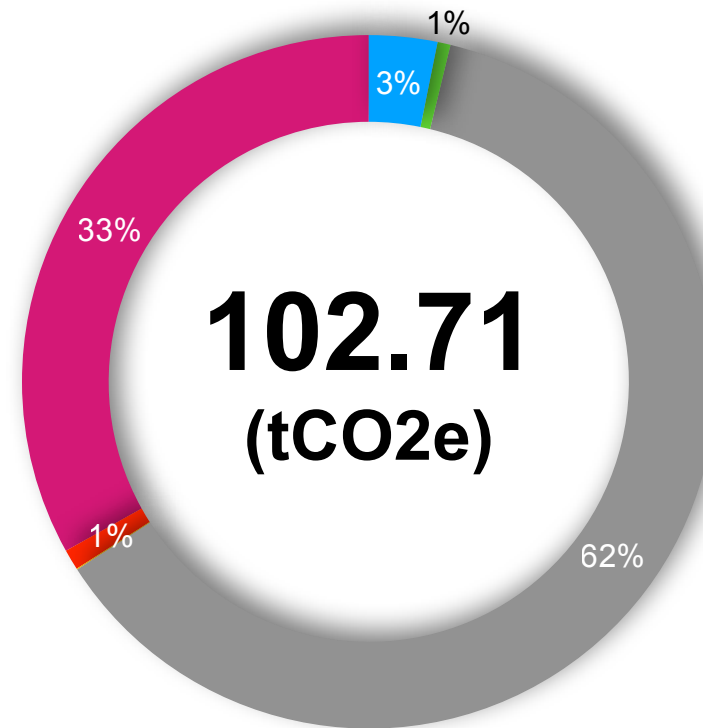
As a Corporate Partner of SolarAid, since 2022 Nomad Exhibitions has provided support as part of our commitment to reduce fossil fuel use and promote sustainable development; we are proud to provide SolarAid with free access to our exhibition systems and expertise to help them to promote their extraordinary work.

During 2024, Nomad provided exhibition display materials to SolarAid to facilitate a presentation at The Wellcome Trust in London.

Summary of all emission categories 2024

Category	Scope	Value (tCO2e)
n/a	1	n/a
Office (comms)	2	3.268
Office (energy)	2	0.622
Construction	3	63.792
Printing	3	0.048
Transportation	3	0.985
Staff travel	3	33.996
Total (tCO2e):		102.712

● Office (comms) ● Office (energy) ● Construction ● Printing
● Transportation ● Staff travel



Office (communications)

Team member	Category	Emissions per unit (grams)	Total units	Energy used (kgCO2e)	Total emissions (tCO2e)
Tim Pethick	Email **	0.3	1,915	0.5745	0.0006
	Slack/WhatsApp messaging	4	3,796	15.184	0.0152
	Zoom/Teams calls ***	-	-	700	0.7000
	Mobile phone *	-	-	86.7	0.0867
Iain Coates	Email **	0.3	1,638	0.4914	0.0005
	Slack/WhatsApp messaging	10	3,796	37.96	0.0380
	Zoom/Teams calls ***	-	-	650	0.6500
	Mobile phone *	-	-	86.7	0.0867
David Roberts	Email **	0.3	2,034	0.6102	0.0006
	Slack/WhatsApp messaging	10	3,796	650	0.6500
	Zoom/Teams calls	-	-	500	0.5000
	Mobile phone *	-	-	86.7	0.0867
Alanna Davidson	Email **	0.3	432	0.1296	0.0001
	Slack/WhatsApp messaging	10	3,796	37.96	0.0380
	Zoom/Teams calls ***	-	-	350	0.3500
	Mobile phone *	-	-	65	0.0650

Total (tCO2e):
3.2680

* <https://honestmobile.co.uk/2020/08/25/whats-the-carbon-footprint-of-my-smartphone/>

** <https://carbonliteracy.com/the-carbon-cost-of-an-email/>

*** <https://www.utilitybidder.co.uk/business-electricity/zoom-emissions/>

Office (energy)

Team member	Category	Emissions per day (kgCO2e)	Total days	Energy used (kgCO2e)	Total emissions (tCO2e)
Tim Pethick	Desktop computer	0.187	250	46.75	0.0468
	Secondary monitor	0.115	250	28.75	0.0288
	LED light	0.012	250	3	0.0030
	Server	0.948	365	346.02	0.3460
	Wifi router	0.012	250	3	0.0030
Iain Coates	Desktop computer	0.187	250	46.75	0.0468
	Secondary monitor	0.115	250	28.75	0.0288
	LED light	0.012	250	3	0.0030
	Wifi router	0.012	250	3	0.0030
David Roberts	Desktop computer	0.187	250	46.75	0.0468
	Secondary monitor	0.115	250	28.75	0.0288
	LED light	0.012	250	3	0.0030
	Wifi router	0.012	250	3	0.0030
Alanna Davidson	Desktop computer	0.187	150	28.05	0.0281
	LED light	0.012	150	1.8	0.0018
	Wifi router	0.012	150	1.8	0.0018
Total (tCO2e):					0.6222

Construction

Project	Category	Quantity				Unit of energy used in production (kgCO2e)	Total energy used (kgCO2e)	Total emissions (tCO2e)
		kg	lin m	no	m2			
Vivienne Westwood & Jewellery	Aluminium system	5,260				11.5	60,490	60.4900
	Acrylic	10				6	60	0.0600
	Solid sheet for formwork	300				0.681	204.3	0.2043
	Barriers and rails							0.0000
	Lighting - LED track		0			5	0	0.0000
	Lighting - LED fittings			16		1	16	0.0160
	Transportation crates			10		11.5	115	0.1150
Eric Liddell Exhibition / China	Aluminium system	250				11.5	2,875	2.8750
	Lighting - LED fittings			32		1	32	0.0320
Total (tCO2e):								63.7923

Printing

Project	Category	Quantity (m2)	Unit of energy used in production (kgCO2e)	Total energy used (kgCO2e)	Total emissions (tCO2e)
Vivienne Westwood & Jewellery	Fabric graphics	523.78	0.055	28.8079	0.0288
	Forex labels	2.5	0.055	0.1375	0.0001
	Vinyl wallpaper	141.4	0.055	7.777	0.0078
Eric Liddell Exhibitions / Glasgow, Edinburgh and China	Fabric graphics	207.02	0.055	11.3861	0.0114
Total (tCO2e):					0.0481

Transportation

Project	Cargo	Routing	Mode	Weight (kg)	Distance traveled (km)	Total emissions (kgCO ₂ e) *	Total emissions (tCO ₂ e)
Vivienne Westwood & Jewellery	Exhibition networks	Madrid to Shanghai	Sea	7,650	16,389	648.13	0.6481
Eric Liddell Exhibition / Glasgow	Exhibition networks	Cousland / Glasgow / Cousland	Road	300	178	18.94	0.0189
Eric Liddell Exhibition / HK	Exhibition networks	Changzhou / HK / Changzhou	Sea	400	1,676	7.36	0.0074
Eric Liddell Exhibition / Tianjin	Exhibition networks	Changzhou / Tianjin / Changzhou	Road	400	1,852	296.22	0.2962
Eric Liddell Exhibition / Edinburgh	Exhibition networks	Cousland / Edinburgh / Cousland	Road	700	38	8.8	0.0088
SolarAid	Exhibition networks	Cousland / London / Cousland	Road	150	1,190	5.76	0.0058

Total (tCO₂e):
0.9852

* <https://www.carboncare.org/en/co2-emissions-calculator.html> – Calculations are based on ENE (Energy Provision, comparable with WTT: Well-to-Tank)

Nomad Exhibitions (UK) Ltd

Staff Travel

Project	Company / Person travelling	Mode	Routing	Total emissions (tCO2e)
Genghis Khan: How the Mongols Changed the World	Nomad / Tim Pethick	Air	Edinburgh / Nantes / Edinburgh	0.4240
	Nomad / Alanna Davidson	Air	Edinburgh / Nantes / Edinburgh	0.4240
	ESM / Rob Gammage	Air	London / Nantes / London	0.2920
	ESM / Phil Cuttance	Air	London / Nantes / London	0.2920
	Nomad / Tim Pethick	Air	Edinburgh / Istanbul / Ulaanbaatar / Return	2.9000
Monkeys: A Primate Story	ESM / Rob Gammage	Air	London / Copenhagen / London	0.5280
	ESM / Ian	Air	London / Copenhagen / London	0.5280
	ESM / Rob Gammage	Air	London / Kuopio / London	0.8090
	ESM / Andy	Air	London / Kuopio / London	0.8090
	ESM / Rob Gammage	Air	London / Kuopio / London	0.8090
	ESM / Andy	Air	London / Kuopio / London	0.8090
GIANTS	ESM / Rob Gammage	Air	London / Brussels / London	0.3200
	ESM / Rhys	Air	London / Brussels / London	0.3200
	ESM / Rob Gammage	Air	Brussels / Toulouse / London	0.4830
	ESM / Rhys	Air	Brussels / Toulouse / London	0.4830
	ESM / Andy	Air	Brussels / Toulouse / London	0.4830
Total (tCO2e):				10.7130

* https://co2.myclimate.org/en/portfolios?calculation_id=4449984 / <https://www.lner.co.uk/tickets-savings/the-best-way-to-travel/our-commitment-to-the-environment/> / <https://ecotree.green/en/calculate-train-co2>

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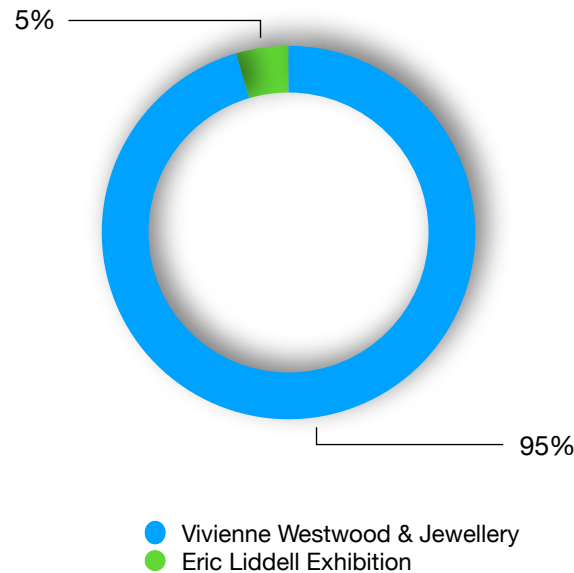
Staff Travel

Project	Company / Person travelling	Mode	Routing	Total emissions (tCO2e)
Vivienne Westwood & Jewellery	Nomad / Iain Coates	Air	Edinburgh / Madrid / Edinburgh	0.7400
	Nomad / Tim Pethick	Air	Edinburgh / Dubai / Brisbane / Wellington / Return	2.7250
	Nomad / Alanna Davidson	Air	Edinburgh / Dubai / Brisbane / Wellington / Return	2.7250
	Nomad / Jake Pethick	Air	Edinburgh / Dubai / Brisbane / Wellington / Return	2.3050
	Nomad / Alanna Davidson	Train	Edinburgh / London / Edinburgh	0.0470
	Nomad / Tim Pethick	Train	Edinburgh / London / Edinburgh	0.0470
	Nomad / Alanna Davidson	Train	Edinburgh / London / Edinburgh	0.0470
	Nomad / Tim Pethick	Train	Edinburgh / London / Edinburgh	0.0470
	ESM / Rob Gammage	Air	Wellington / London	5.2000
	ESM / Phil Cuttance	Air	Wellington / Auckland	0.1810
	VW / JJ	Air	Bangkok / Sydney / Wellington / Sydney / Bangkok	3.6000
	VW / Soda	Air	Bangkok / Sydney / Wellington / Sydney / Bangkok	3.6000
Conference / Other	Nomad / Alanna Davidson	Air	Edinburgh / Helsinki / Tartu / Helsinki / Edinburgh	1.0000
	Nomad / Alanna Davidson	Air	Edinburgh / Helsinki / Tartu / Helsinki / Edinburgh	1.0000
	Nomad / Alanna Davidson	Air	Edinburgh / Ljubljana / Edinburgh	0.7260
	Nomad / Alanna Davidson	Train	Edinburgh / Coventry / Edinburgh	0.0165
	Nomad / Tim Pethick	Train	Edinburgh / Coventry / Edinburgh	0.0165
Total (tCO2e):				23.2831

* https://co2.myclimate.org/en/portfolios?calculation_id=4449984 / <https://www.lner.co.uk/tickets-savings/the-best-way-to-travel/our-commitment-to-the-environment/> / <https://ecotree.green/en/calculate-train-co2>

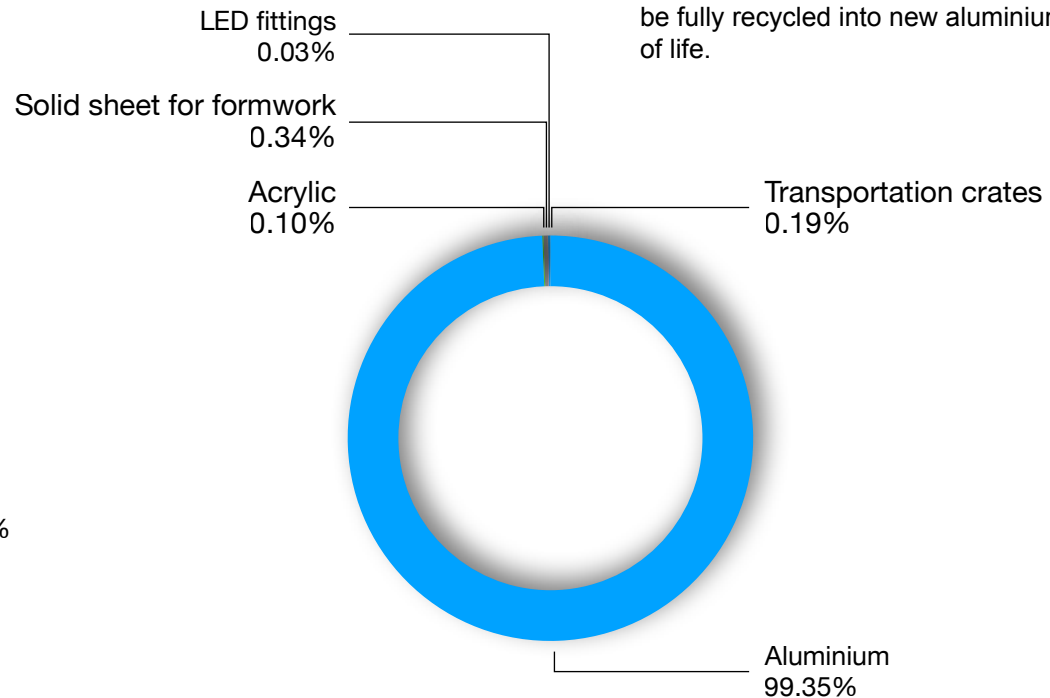
Scope 3 emissions – analysis

Nomad Exhibitions has developed a unique approach to the design and production of touring exhibitions which is based on reusability, recyclability and zero waste. Once a Nomad touring exhibition has been constructed it can tour to multiple venues for many years, or its component parts can be reused in other Nomad productions.



During 2024 Nomad built two new exhibitions (Vivienne Westwood & Jewellery) and the Eric Liddell Exhibition and continued the tour of three other exhibition productions.

The graph below left illustrates the varying proportions of emissions created in the production of the two exhibitions for which new networks were created.



The graph below right illustrates the proportional breakdown of emissions arising from the production process for our complete new exhibition, Vivienne Westwood & Jewellery.

The graph illustrates the high proportion of aluminium involved in our exhibition production approach. This benefits the environment as our aluminium systems have a long life of use and reuse, and they can be fully recycled into new aluminium at end of life.

Scope 3 emissions – analysis

Our sustainable production and logistics approach ensures a relatively low carbon footprint is created. Particularly when the factors of long term reusability, and zero land fill at end of life, are factored in.

For the future, Nomad plans to further reduce its own, and its value chain, emissions through sourcing greener produced aluminium.

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