National Carbon Offset Standard for Events

Carbon Neutral Program

Large Event

Post-Event Public Disclosure Summary

An Australian Government Initiative

THIS DOCUMENT WILL BE MADE PUBLICLY AVAILABLE

RESPONSIBLE ENTITY NAME: Adelaide Festival Corporation

EVENT NAME: Adelaide Festival 2020

EVENT DATE: 28 Feb 2020 – 15 Mar 2020 plus year-round corporate emissions

Declaration

To the best of my knowledge, the information provided in this Public Disclosure Summary is true and correct and meets the requirements of the *National Carbon Offset Standard for Events*.

	5 August 2020
Elaine Chia	
Executive Director of the Adelaide Festival	

Australian Government
Department of the Environment and Energy

1. Carbon neutral information

This carbon account has been prepared based on the *National Carbon Offset Standard for Events.* As a large event the carbon inventory has been prepared using the standard Event calculator prepared by the National Carbon Offset Standard.

1A. Introduction

Founded in 1960 the Adelaide Festival is a major festival held annually in and around the City of Adelaide. It is organised and run by a South Australian Government Corporation (Adelaide Festival Corporation). The planning for each Festival extends over the full year leading into it.

In 2020 the event encompassed around 91,300 ticketed attendances, set a box office income record for the Adelaide Festival of just over $5 million, and attracted approximately 17,100 interstate and overseas visitors.

It has been estimated that the 2020 event generated around $70 million in economic impact in South Australia.

In general terms, the Adelaide Festival features approximately 500 performances with around 70,000 ticketed attendances across 20 or so venues mostly spread around Adelaide and its inner suburbs over a period of about 3 weeks. The Festival features some large-scale outdoor events (e.g. a free Opening Night concert), free exhibitions and encompasses one of the

country's largest literary festivals (Adelaide Writers' Week). In 2020 around 1,400 artists and writers came from around the world to participate.

An event of this size comes at a cost in relation to carbon emissions. The Adelaide Festival has decided to take a leadership position as one of the first major festivals in Australia to become carbon neutral. The Adelaide Festival is committed to reducing its carbon emissions where it can do so directly, particularly at the major outdoor events, but also to work with and influence its suppliers and the many theatres and other venues where performances are held. It also engages audiences, artists, employees and volunteers in practices that will cut emissions per attendee to make the 2020 event as sustainable as possible.

This carbon account has been prepared based on the *National Carbon Offset Standard for Events*. The operational control method of setting the event emissions boundary has been applied.

The greenhouse gases considered in this carbon account are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3).

2. Emissions reduction measures

Adelaide Festival Corporation has maintained a Sustainability Committee over the two years and has undertaken a variety of environmental/emissions reduction activities in relation to their corporate office as well as for the event itself. For example, in 2019 LED lighting was installed in the office.

In preparing for the 2020 event, a workshop was held with the aim of identifying sustainability opportunities across seven categories set out in the City of Adelaide's Sustainable Events Guidelines. As this is the first year of running the event as carbon neutral, there has not been any baseline emission data and so targets have not been set for this year.

Adelaide Festival will aim to widely promote the carbon neutral certification for 2020 with the aim of engaging its suppliers and venue owners/operators.

Planned emissions reduction activities fall into the following categories:

- Energy efficiency and use of renewable energy
- Waste reduction and recycling
- Water efficient
- Low emissions transport
- Sustainable supply chain
- Measurement, marketing and engagement.

Key strategies include:

- Utilising the City of Adelaide's renewable energy network in the Adelaide Parklands and Botanic Gardens.

- Reducing waste by mandating the use of compostable or recyclable materials by food trucks, implementing ways to educate attendees to use the correct bins and to minimise their waste by bringing their own refillable water bottles.
- Facilitating lower emission forms of travel for artists, attendees and staff including public transport, city bikes, more bike parking and utilising fuel efficient vehicles where possible for hired vehicles and freight services.
- Seeking ways to reduce printed materials, including ticketing and day bills, by creating electronic programs, re-using day bills and engaging with suppliers.
- Seeking to re-purpose old sets and props wherever possible through post-festival sales and donation, rather than sending to landfill.
- Aiming to re-use as many items as possible including t-shirts, fence wrap, signage etc. to avoid sending to landfill.
- Removing dates from as many generic branded items as possible, to facilitate re-use in future years.
- Where possible, carbon neutral products or services will be sourced.

3. Emissions boundary

As it is not possible to separate the corporate activities from the event itself, the emissions boundary includes the Adelaide Festival Corporation's office, warehousing and other storage for the periods of the year for which they are in use.

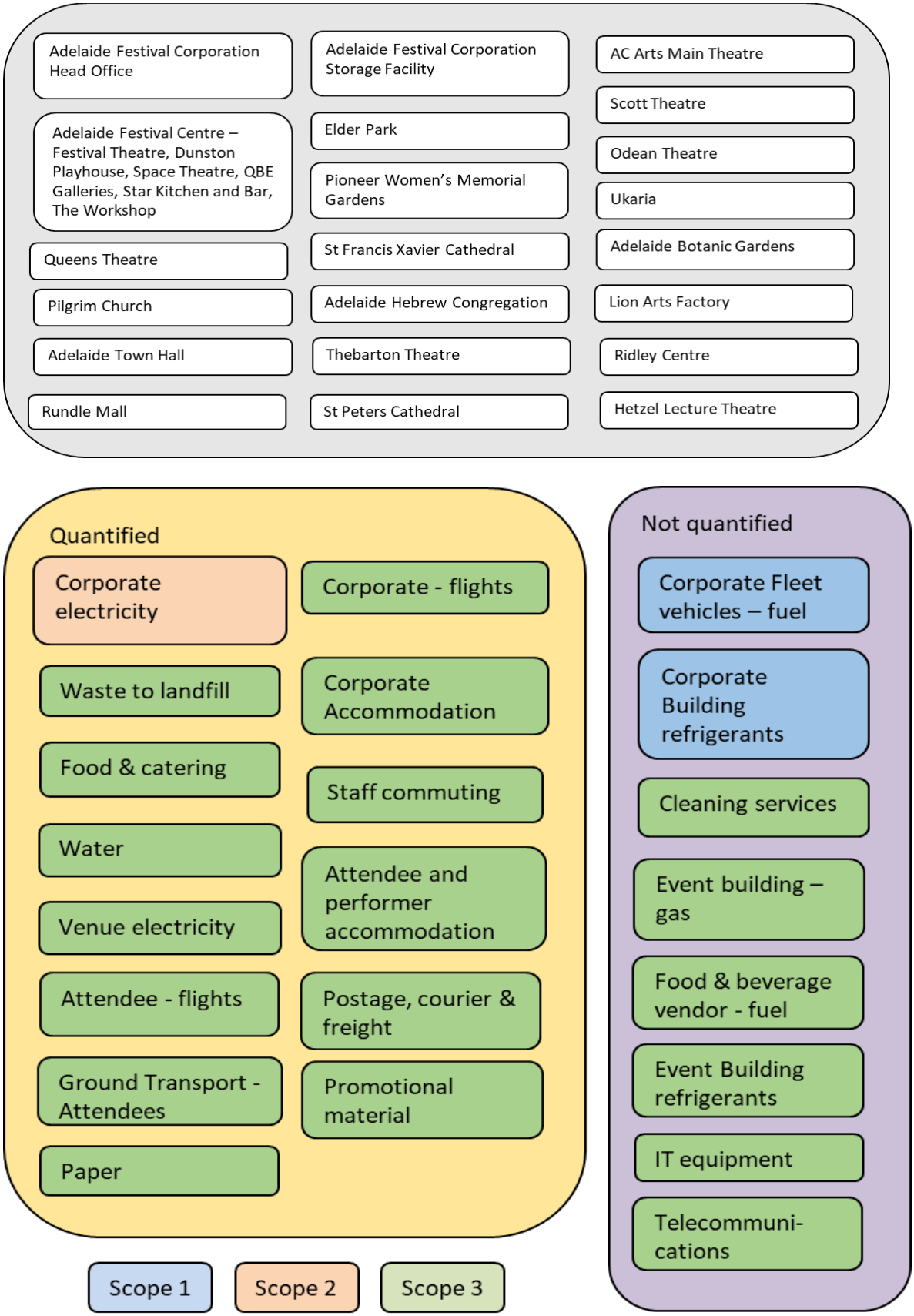
Scopes 1, 2 and 3 emissions have been included in the boundary and comprise electricity, artist and attendee travel (flights and ground transport), accommodation, employee commuting, waste, catering and water.

Emission sources outside certification boundary

The following emission sources have been excluded from the emissions boundary in line with the provisions in the Event Standard.

- Umbrella productions have been excluded as they fall outside of the control of the responsible entity as they are run by partners and in some cases (e.g. WOMADelaide) already have offset programs of their own.
- Printed t-shirts and bags, largely for employee and volunteer use have been excluded as they are deemed immaterial and it is difficult to quantify the emissions associated with their full lifecycle.
- travel to and from the opening concert in the Adelaide CBD (total of 16,849 persons) was halved across the total attendees as this was a Friday night event and a proportion of the participants were considered to have already come to the city.
- Refrigerants, natural gas, couriers, postage, cleaning, telecommunications and construction material were all either excluded or not quantified as they were considered immaterial. However, freight and paper consumption have been included. Given the changes in structure of the festival from year to year, the precise nature of the material emission sources is likely to change.

Diagram of the certification boundary



Sources that have not been quantified include those for which emissions were considered to be immaterial. Otherwise, all sources have been included either from those derived from the pre-event calculator or estimated independently and included in as part of the uplift (see below).

4. Emissions summary

Emission Category	**tCO_2-e**
Local transport	730
Ground transport	191
International Flights	2147
Domestic Flights	2420
Additional Flights	297
Food	2560
Water	9
Waste	48
Accommodation	861
Electricity	888
Total tCO_2e	10,151
Uplift factor/adjustment (as a %) OR	
Uplift factor/adjustment (as tCO2e)	502
Total tCO_2e + uplift factor	10,653
Description of activities covered by uplift factor:	Uplift includes emissions estimates for the Howard and Sons Pyrotechnics Freight movements (air, sea and road) Purchased paper consumption for both corporate and the event Emissions estimates for the Compagnie Carabosse

5. Data collection

Collation of post event data for the 2020 Adelaide Festival has proved to be quite challenging in light of Covid 19 influences across the entertainment and tourist sector. Many theatres have closed and/or are employing a bare minimum of maintenance staff such that obtaining some primary data has not been possible.

Data collected prior to or at the time of the event (notably waste, local transport, accommodation and similar) are largely unaffected but, energy consumption across most facilities has had to be estimated based on the floor area – usage time model.

Event emissions

Significate Emission Sources		
Emission source	Data collection method	Assumptions
Local transport	Source Data: Economic Impact Report 2019 Festival and non-ticketed event summary data The total number of ticketed performances was 91,315, with a further 207,938 attendees going to free events (particularly the opening night concert and Writer's Week). For the purposed of local transport, the event was broken into broader components including: • Ticketed events (91,315 persons) • Opening concert (16,849 persons) • Writer's Week (93,500 persons) The total activity (in kilometres) was calculated independently using the same estimation framework as in the Climate Active calculator. The resulting kilometres travel were then summed across each travel category (e.g. Bicycle, Bus, Car, Walking, Taxi, Train, Tram, etc.).	Other than Writers Week and the opening concert it was considered likely that attendees would visit these in conjunction with other events/activities. For the opening concert it was assumed that there was a significant portion of attendees already in the city (being a Friday night) and so the input number was halved. It has been assumed that the model incorporates a degree of vehicle sharing otherwise the ensuing carbon estimate is highly conservative.

Regional Ground Transport	Source Data: Economic Impact Report 2019 Festival The number of regional attendees was estimated based on the average number of ticketed events undertaken as well as the motivation for travelling to the Festival (see the flight estimate example below) 1,934 persons (Table 1) allocated evenly across each of the regional departure points. The total activity (in kilometres) was calculated independently using the same estimation framework as in the calculator model.	
Flights Domestic	Source: Adelaide Festival internal data and Economic Impact Report 2019 Festival Domestic flights were estimated based on the percentage of ticketed attendances from each state divided by the average number of ticketed events that participants undertook and offset by an indicator of attendee motivation for travelling to Adelaide. For example, NSW attendees accounted for 6,525 of the ticketed attendances. Given that, on average, each person from this state went to 1.96 events with 79% festival oriented motivation, the total number of persons from NSW allocated to the festival was estimated at 2,615 (Table 1). This number was then doubled to account for a two-way journey.	It has been assumed that interstate visitors have come from their relevant state capital

Flights International	Source: Adelaide Festival internal data and Economic Impact Report 2019 Festival In terms of the number of persons, international flights used the same approach as for domestic travellers (see above; Table 1). However, there is no data on the country of origin for international visitors. Allocation of international flights was therefore allocated based on the proportion of international visitors from each region generated in the Climate Active calculator model.	
Water	Source Data: Economic Impact Report 2019 Festival Uses the calculator model based on the total number of attendances (299,253). The total activity (in litres) was calculated independently using the same estimation framework as in the calculator model.	

Food	Food and drink calculations for the event were complex and reliant upon multiple data sources including: 1. Economic Impact Report provided data on the numbers of attendees and their expenditure 2. Data on venues in terms of food and drink availability (most had only bars) 3. Data to assist in apportionment of the drink expenditure across beer, wine/spirits and soft drink (pattern based on Palais Venue calculations from 2019) The modified number of attendees was used to generate an estimate of total food expenditure using the Food and Drink expenditure from all festival venues. This gives a total expenditure estimate of ~ $2,410,000 across the course of the event. Many venues had neither food nor bar facilities Of the remainder 70% had only bars and snack offerings. To account for the fact that snacks were still available at bar facilities, the food to drink expenditure ratio was set at 37:63, meaning that at 63% of the total food expenditure was allocated to drinks (including beer, wine, spirits, soft drinks as well as an allocation to tea and coffee). The drinks components of the total food expenditure were estimated to be 63% of the total ($1,518,000) spread over beer, wine and soft drink in proportion to the ratios derived from sales pattern at the Palais Venue in 2019 (33% 58% and 9% respectively) with an estimated allocation to tea and coffee (2% of total food expenditure).	

	No data were available on the breakdown of the remaining food expenditure (37% of the total) and so an assumption was made that the breakdown was roughly evenly across remaining major categories (10% each for vegetables, meat and poultry, with 5% allocated to seafood), with the remaining 2% divided across bread, dairy, oils and sugar. Note there was no allocation to flour and cereals as well as dairy drinks as these were considered less likely to be influential for events predominantly run in evenings.	

Waste	Source: Adelaide Festival data collated from venues Australian Clean Green AF Opening Night Concert 2020 Waste Report Australian Clean Green AF Writer's Week 2020 Waste Report Waste associated with the Elder Park, opening night and Writers Week venues (totalling 9.59 tonnes) was all recycled and therefore not included in the emissions estimate. Across other venues/events the total waste volume was calculated based on the number and size (in litres) of bins, the clearance rate during the event and the percentage full at emptying. The total landfill volume calculated with this method (30,592 L) equates to 133.5 x 240 L bins collected once at 100% full. For venues where no data could be obtained, the waste volume was estimated based on the number of days the venue was employed in the festival relative to the average number of bins across other venues. This brought the total to 186.5 x 240 L bin equivalents. Green and organic waste was calculated in the same manner at 19.76 x 240 L bins collected once at 100% full. Paper waste was not identified, although this was most likely included within mixed recycling which was estimated at 72.37 x 240 L bins collected once at 100% full or as a component of the undifferentiated waste.	Landfill waste data was based on the number of 240 L bins across a range of venues and events. All waste streams that were allocated to recycling were assumed to attract zero emissions.

Accommodation	Source: Economic Impact Report 2019 Festival and Event survey data A modified number of 8,662 interstate and overseas persons (Table 1) came to the state with an average of 10 nights. However, assuming twin share across visitors (which seems likely to be conservative) the number of nights was halved. In addition, survey data conducted at events (opening concert and writer's week) indicated that only around 34% of visitors stayed in hotels/motels, with the bulk of the remainder staying with friends/family or B&Bs. The total number of nights spent was therefore halved again to account for more than half the visitors that used less carbon intensive accommodation. Data were evenly distributed across each of the accommodation star ratings (that ranged from 2-5).	It has been assumed that the vast bulk of attendees travelled as at least pairs. It has been assumed that staying with family or friends as well as B&Bs are less carbon intensive than hotels.

Electricity	Source: Adelaide Festival data on 2019 venues and related performance data. Venue electricity was based on the area usage x hours performance model. However, owing to the use of multiple venues, the total kilowatt hours per venue during the event was calculated independently using the same model as the calculator and the total included in the Actuals data stream. The area of each venue was determined either from venue data and/or seating configuration maps and some web map interpretations. The period of occupation for each venue was determined based on scheduling software. Note that outdoor venues – Elder Park and the Pioneer Women's Garden used empirical electricity measurements from the previous year. This approach was used owing to: 1. A lack of actual data for these venues (unlike the previous year) 2. The use of the venue was more or less identical to the previous year 3. Based on the available data, the floor area model provides a poor interpretation of the actual electricity consumed at outdoor sites. At the Botanic Gardens there was no electricity consumption data from the previous year. The average electricity consumption per metre squared at each of the other outdoor sites was used to obtain an indication of the consumption. Note that this resulted in one of the higher electricity estimates (Table 2). When combine a total electricity estimate of 939,092 kWh was included.	

Uplift	Source: Data from Adelaide Festival Howard and Sons Pyrotechnics has reported ~19.5 kg CO2-e emissions for the firework display they undertook for the 2020 festival. Although note that the related report does not appear to have been independently verified. Additional freight related emissions (283 tonnes CO_2-e) was derived shipping data using weight of freight, distance and mode of transport (sea, air or land) using the UK DBEIS/DEFRA factors for 2019 (https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2019, Accessed August 2019). An estimate of emissions related to purchased paper for the event was included based on AF internal data. For the event data, ~20.5 tonnes of paper were purchased related to the printing of the booking guide, posters and day bills. Paper emissions were based on EPA Victoria paper emissions estimates (https://www.epa.vic.gov.au/~/media/Publications/1374%201.pdf, Accessed August 2019) with guidance from the NCOS recommendations for Scope 3 emissions (https://www.environment.gov.au/system/files/resources/77ad8223-25c9-46ac-a4cc-8a077fbe82b9/files/cnp-	In the absence of any other information, distances were assumed to be the shortest direct route. If no weights were obtained, the tonne.km was based on half the gross weight capacity of the standard shipping container, assuming that the material for a performance were unlikely to be heavy. Performance groups coming to South Australia were often "shared" with other festivals in the broader region. In this instance the emission was apportioned to the Adelaide Festival based on its position in the sequence of festivals and the number of festivals involved. As the paper type (recycled versus virgin fibre) was unknown, it was allocated to the recycled emissions factor as this was the more conservative. Note that corporate paper consumption was all carbon neutral paper and therefore assumed to have zero emissions.

	scope-3-calculations.pdf, Accessed August 2019). Paper thus resulted in emissions in the order of 30.75 tonnes CO_2-e. An emission estimate of 169 tonnes CO_2-e associated with the Carabosse Performance at the 2020 festival. Although note that the related report does not appear to have been independently verified. Total uplift emissions were thus estimated at 502 tonnes CO2-e.	

Table 1 – Breakdown of Adelaide Festival s with adjusted number taking into account survey data on the reasons for visiting the state as well as the average number of events visited by each .

Source	Number	Modified number
Local	69,701	35,489
Regional SA	4,826	1,934
Overseas	1,597	640
NSW	6,525	2,615
Vic	5,981	2,397
QLD	1,155	463
Tas	238	95
ACT	578	232
NT	136	55
WA	578	232
Total	91,315	44,152

Table 2 - Venue electricity consumption estimate based on floor area and time of use

Name	Number of hours in venue (hrs)	Area (m^2)	Estimated kWh
Festival Theatre	300	2,968	244,860
Playhouse Theatre	255	1,950	136,743
Space Theatre	170	900	42,075
QBE Galleries	170	600	28,050
Star Kitchen & Bar	96	576	15,206
The Workshop	228	437	27,399
AC Arts Main Theatre	137	500	18,837
Elder Park*			15,633
Pioneer Women's Memorial Gardens*			89,100
Scott Theatre	91	630	3,725
Odeon	158	240	10,428
Queens Theatre	361	880	1,388
Ukaria	101	227	1,360
St Peters Cathedral	29.5	1200	9,735
St Francis Cathedral	22.75	1100	6,881
Adelaide Hebrew Congregation	12	520	1,716
Pilgrim Church	14	506	1,948
Thebarton Theatre	43	500	5,912
Rundle Mall	396	206	22,433
Adelaide Town Hall	47	445	5,751
Adelaide Botanic Gardens**		69,540	184,187
Lion Arts Factory	73	237	4,757
Ridley Centre	103	1815	51,409
Hetzel Lecture Theatre	227	153	9,551
Total			939,092

* Based on empirical data from the previous year (there is little difference between years)

** Based on the average consumption per metre squared across the other outdoor venues

Corporate emissions

Significate Emission Sources		
Emission source	Data collection method	Assumptions
Local transport	Adelaide Festival staff commuting across the year was derived based on an in-house survey as well as a volunteer program report. A total of 176 volunteers were used over the period of the festival. These were converted to an FTE equivalent and converted to distances in each transport mode using the average commute breakdown and distance across paid staff.	Assumes 220 working days per year across all staff with an extra 8 days added owing to week-round operations during festival time
Regional Ground Transport	Not applicable to corporate emissions	
Flights Domestic	Domestic flights have been allocated according to Adelaide Festival travel agent reports based on the number of flights within each pair of departure and destination airport codes.	
Flights International	International flights have been allocated according to Adelaide Festival travel agent reports based on the number of flights within each pair of departure and destination airport codes. International flights to/from Australia were considered using the number of flights within the broader regional categories defined in the calculator. Note that travel between international destinations was included with allocations according to the distance between each of the respective airports.	One international destination (New Zealand) was not available. The distance from Adelaide to Singapore was used although with half the number of trips to account for differences in distance (3,260 km versus 6,305). Against the large amount of corporate national and international travel, any difference is considered to be inconsequential.

Water	Water has been estimated based on 20 staff for 220 days at 36L/day based on the model in the calculator.	
Food	Source: Adelaide Festival data Data included expenditure on food and drink as well as the nature of the food (i.e. mostly cocktail snacks that were 80% vegetarian/gluten free). The remaining food expenditure was evenly distributed across the remaining categories (although not including sugar and confectionary) Drinks were allocated across wine, beer and soft according to the ratio of expenditure across event data (i.e. weighted toward wine and spirits- see above).	
Waste	Source: Adelaide Festival internal reporting Corporate landfill waste was attributed to a single 240 L bin and an 1,100 L skip bin at the Adelaide Festival Storage facility which were emptied 6-7 times per year at 100% full. This gave aa estimate of 38.08 x 240 L bin equivalents. Green waste was estimated at 6 x 240 L bin equivalents. Recycled waste was estimated at 6 x 240 L bin equivalents.	Other corporate waste streams (mostly paper and some office related kitchen waste) are assumed to be either recycled or non-substantive.
Accommodation	Source: Adelaide Festival accommodation tracker reports and travel agent data on total number of nights at each hotel.	Hotel star ratings were derived from web searches. Where this could not be discerned, a five-star rating was assumed. International venues were assumed to be four-star.

Electricity	Source: Adelaide Festival data Corporate electricity was based on kWh usage derived from tenancy invoices with some additional power allocated for extra air-conditioner usage based on consumption per hour within each month (assuming a 12-hour operational time per day) multiplied by the number of additional hours. This approach supplied a corporate electricity consumption estimate of about 51,100 kWh.	
Uplift	An estimate of emissions related to purchased paper for corporate operations was included based on AF internal data. Over half the corporate paper (~40 reams) was carbon neutral and not included, leaving ~30 reams to be included. Paper emissions were based on EPA Victoria paper emissions estimates (https://www.epa.vic.gov.au/~/media/Publications/1374%201.pdf, Accessed August 2019) with guidance from the NCOS recommendations for Scope 3 emissions (https://www.environment.gov.au/system/files/resources/77ad8223-25c9-46ac-a4cc-8a077fbe82b9/files/cnp-scope-3-calculations.pdf, Accessed August 2019).	As the paper type (recycled versus virgin fibre) was unknown, it was allocated to the recycled emissions factor as this was the more conservative.

6. Eligible offset units

6A. Offsets summary

Table 4. Offsets Summary

Projects supported by offset purchase	Eligible offset units	Registry	Cancellation date	Serial numbers (including hyperlink to registry transaction record)	Vintage	Quantity
Wind power project by HZL in Gujarat. India	VCUs	VERRA	24th October 2019	Serial #:6761-341775589-341775751-VCU-034-APX-IN-1-344-01112013-31122013-0 https://registry.verra.org/myModule/rpt/myrpt.asp?r=206&h=106132	2013	163
Wind power project by HZL in Gujarat. India	VCUs	VERRA	24th October 2019	Serial #: 6761-341765397-341766067-VCU-034-APX-IN-1-344-01112013-31122013-0 https://registry.verra.org/myModule/rpt/myrpt.asp?r=206&h=27778	2013	671
Wind power project by HZL in Gujarat. India	VCUs	VERRA	24th October 2019	Serial #: 6761-341758355-341760162-VCU-034-APX-IN-1-344-01112013-31122013-0 https://registry.verra.org/myModule/rpt/myrpt.asp?r=206&h=25988	2013	1808

Table 4. Offsets Summary						
Projects supported by offset purchase	Eligible offset units	Registry	Cancellation date	Serial numbers (including hyperlink to registry transaction record)	Vintage	Quantity
Wind power project by HZL in Gujarat. India	VCUs	VERRA	24th October 2019	Serial #: 6761-341760163-341761970-VCU-034-APX-IN-1-344-01112013-31122013-0 https://registry.verra.org/myModule/rpt/myrpt.asp?r=206&h=27779	2013	1808
Wind power project by HZL in Gujarat. India	VCUs	VERRA	24th October 2019	Serial #: 6761-341773781-341775588-VCU-034-APX-IN-1-344-01112013-31122013-0 https://registry.verra.org/myModule/rpt/myrpt.asp?r=206&h=26030	2013	1808
Wind power project by HZL in Gujarat. India	VCUs	VERRA	24th October 2019	Serial #: 6761-341761971-341764725-VCU-034-APX-IN-1-344-01112013-31122013-0 https://registry.verra.org/myModule/rpt/myrpt.asp?r=206&h=27780	2013	2755
Total offsets cancelled – Pre-event						9013
Total additional offsets cancelled – Post-event						
199.70 MW Wind Project in Maharashtra by BWDPL India	VCUs	VERRA	3rd July 2020	Serial # 5679-254901063-254901480-VCU-034-MER-IN-1-1447-17052013-31122013-0 https://registry.verra.org/myModule/rpt/myrpt.asp?r=206&h=21409	2013	418

Table 4. Offsets Summary						
Projects supported by offset purchase	Eligible offset units	Registry	Cancellation date	Serial numbers (including hyperlink to registry transaction record)	Vintage	Quantity
Grid Interactive Solar Photovoltaic Power Project in Gujarat	VCUs	VERRA	29th July 2020	Serial # 4163-176536015-176537236-VCU-037-APX-IN-1-1413-01012013-30102013-0 https://registry.verra.org/myModule/rpt/myrpt.asp?r=206&h=114944	2013	1222
Total emission cancelled						10,635

7. Use of certification trade mark

Where and when is the trademark planned to be used.

Table 5. Trade mark register
[Promotional flier]
[Website – http://xyz.com.au]