

Form Number: A1

Reporting of Emissions to Air for the period from 1st January 2015 to 31st December 2015

Emission Point	Substance / Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾
A1	Oxides of nitrogen as NO ₂	220mg/m ³ [6]	199.6	BS EN 14792	14.05 – 15.05 (11 June 2015)	Mcerts MC 050056/00	25.4
A1	Carbon monoxide	None	<1.3	BS EN 15068	14.05 – 15.05 (11 June 2015)	Mcerts MC 050056/00	11.6
A1	Oxygen	None	3.1	BS EN 14789	14.05 – 15.05 (11 June 2015)		
A1	Temperature	None	188	-	14.05 – 15.05 (11 June 2015)		
A2	Oxides of nitrogen as NO ₂	220mg/m ³ [6]	196.1	BS EN 14792	12.50 – 13.50 (8 May 2015)	Mcerts MC 050056/00	25.7
A2	Carbon monoxide	None	4.0	BS EN 15068	12.50 – 13.50 (8 May 2015)	Mcerts MC 050056/00	11.6
A2	Oxygen	None	6.4	BS EN 14789	12.50 – 13.50 (8 May 2015)		
A2	Temperature	None	182	-	12.50 – 13.50 (8 May 2015)		
A3	Oxides of nitrogen as NO ₂	140mg/m ³ [6]	102.5	BS EN 14792	11.45 – 12.45 (8 May 2015)	Mcerts MC 050056/00	24.3
A3	Carbon monoxide	None	5.8	BS EN 15068	11.45 – 12.45 (8 May 2015)	Mcerts MC 050056/00	11.6
A3	Oxygen	None	1.4	BS EN 14789	11.45 – 12.45 (8 May 2015)		
A3	Temperature	None	91	-	11.45 – 12.45 (8 May 2015)		
A4	Oxides of nitrogen as NO ₂	140mg/m ³ [6]	75.9	BS EN 14792	13.01 – 14.01 (11 June 2015)	Mcerts MC 050056/00	24.2
A4	Carbon monoxide	None	<1.5	BS EN 15068	13.01 – 14.01 (11 June 2015)	Mcerts MC 050056/00	11.6
A4	Oxygen	None	5.2	BS EN 14789	13.01 – 14.01 (11 June 2015)		
A4	Temperature	None	168	-	13.01 – 14.01 (11 June 2015)		
A1	Oxides of nitrogen as NO ₂	220mg/m ³ [6]	214	BS EN 14792	09.50 – 10.50 (18 Nov 2015)	Mcerts MC 050056/00	26
A1	Carbon monoxide	None	<1.6	BS EN 15068	09.50 – 10.50 (18 Nov 2015)	Mcerts MC 050056/00	12
A1	Oxygen	None	5.8	BS EN 14789	09.50 – 10.50 (18 Nov 2015)		
A1	Temperature	None	180		09.50 – 10.50 (18 Nov 2015)		
A2	Oxides of nitrogen as NO ₂	220mg/m ³ [6]	201	BS EN 14792	10.53 – 11.53 (18 Nov 2015)	Mcerts MC 050056/00	26
A2	Carbon monoxide	None	<1.7	BS EN 15068	10.53 – 11.53 (18 Nov 2015)	Mcerts MC 050056/00	12
A2	Oxygen	None	7.3	BS EN 14789	10.53 – 11.53 (18 Nov 2015)		
A2	Temperature	None	183	-	10.53 – 11.53 (18 Nov 2015)		
A3	Oxides of nitrogen as NO ₂	140mg/m ³ [6]	99	BS EN 14792	11.15 – 12.15 (26 Nov 2015)	Mcerts MC 050056/00	24
A3	Carbon monoxide	None	4.3	BS EN 15068	11.15 – 12.15 (26 Nov 2015)	Mcerts MC 050056/00	12
A3	Oxygen	None	1.4	BS EN 14789	11.15 – 12.15 (26 Nov 2015)		
A3	Temperature	None	89	-	11.15 – 12.15 (26 Nov 2015)		
A4	Oxides of nitrogen as NO ₂	140mg/m ³ [6]	86	BS EN 14792	12.28 – 13.28 (26 Nov 2015)	Mcerts MC 050056/00	24
A4	Carbon monoxide	None	1.9	BS EN 15068	12.28 – 13.28 (26 Nov 2015)	Mcerts MC 050056/00	12
A4	Oxygen	None	6.6	BS EN 14789	12.28 – 13.28 (26 Nov 2015)		
A4	Temperature	None	171		12.28 – 13.28 (26 Nov 2015)		
A5	Oxides of nitrogen as NO ₂	350mg/m ³ [7]	Not running	Not running	Not running	Not running	Not running

A5	Carbon monoxide	500mg/m ³ [7]	Not running	Not running	Not running	Not running
A5	Oxygen	None	Not running	Not running	Not running	Not running
A5	Temperature	None	Not running	Not running	Not running	Not running
A6	Oxides of nitrogen as NO ₂	350mg/m ³ [7]	Not running	Not running	Not running	Not running
A6	Carbon monoxide	500mg/m ³ [7]	Not running	Not running	Not running	Not running
A6	Oxygen	None	Not running	Not running	Not running	Not running
A6	Temperature	None	Not running	Not running	Not running	Not running
A5	Oxides of nitrogen as NO ₂	350mg/m ³ [7]	Not running	Not running	Not running	Not running
A5	Carbon monoxide	500mg/m ³ [7]	Not running	Not running	Not running	Not running
A5	Oxygen	None	Not running	Not running	Not running	Not running
A5	Temperature	None	Not running	Not running	Not running	Not running
A6	Oxides of nitrogen as NO ₂	350mg/m ³ [7]	Not running	Not running	Not running	Not running
A6	Carbon monoxide	500mg/m ³ [7]	Not running	Not running	Not running	Not running
A6	Oxygen	None	Not running	Not running	Not running	Not running
A6	Temperature	None	Not running	Not running	Not running	Not running

Form Number: A1

- [1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
- [2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. gas chromatography.
- [3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
- [4] The accreditation status of the equipment and/or the monitoring organisation, as appropriate, for the methods used for both sampling and analysis.
- [5] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated. The following uncertainties are quoted on a different basis (basis as stated) – {The basis of any other uncertainty figure needs to be stated. Where no figure is available the Agency will need to agree an appropriate uncertainty value.}
- [6] Corrected to 273K, 101.3kPa, 5% oxygen, dry
- [7] Corrected to 273K, 101.3kPa, 15% oxygen, dry

Signed Kathryn Fowler Date..... 23/1/2016
(authorised to sign as representative of the Operator)

Permit Number: EPR/BX72821S
Facility: Magor Brewery
Date of form 19/07/11

Operator: Inbev UK Ltd
Form Number: A2.

Reporting of emissions to air for the period from 1st January 2015 to 31st December 2015

Emission		Emission					
Emission Point	Substance / Parameter	Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/certification ^[4]	Uncertainty ^[5]
A8	Oxides of nitrogen as NO2	500	416	BS EN 14792	13.55 – 14.55 24 th March	Mcerts MC 050056/00	51
	Carbon monoxide	650	679	BS EN 15058	13.55 – 14.55 24 th March	Mcerts MC 050056/00	64
	Sulphur Dioxide	80	3.3	BS EN 14791	13.55 – 14.55 24 th March	Mcerts MC 050056/00	0.4
	Oxides of nitrogen as NO2	500	461	BS EN 14792	10.05 – 11.05 30 th July	Mcerts MC 050056/00	55
	Carbon monoxide	650	642	BS EN 15058	10.05 – 11.05 30 th July	Mcerts MC 050056/00	67
	Sulphur Dioxide	80	1	BS EN 14791	10.05 – 11.05 30 th July	Mcerts MC 050056/00	0.07
	Oxides of nitrogen as NO2	500	461	BS EN 14792	11.05 – 12.05 25 th Sept	Mcerts MC 050056/00	52
	Carbon monoxide	650	643	BS EN 15058	11.05 – 12.05 25 th Sept	Mcerts MC 050056/00	68
	Sulphur Dioxide	80	6	BS EN 14791	11.05 – 12.05 25 th Sept	Mcerts MC 050056/00	0.7
	Oxides of nitrogen as NO2	500	482	BS EN 14792	13.00 – 14.00 18 th Nov	Mcerts MC 050056/00	49
	Carbon monoxide	650	643	BS EN 15058	13.00 – 14.00 18 th Nov	Mcerts MC 050056/00	64
	Sulphur Dioxide	80	10	BS EN 14791	13.00 – 14.00 18 th Nov	Mcerts MC 050056/00	1.3

1. The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
2. Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
3. For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
4. The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed Kathryn Fowler..... Date.....23/1/2016...
(Authorised to sign as representative of Inbev UK Ltd)

Permit Number: EPR/BX72821S Operator: Inbev UK Ltd 19/07/11
Facility: Magor Brewery Form Number: E2. Date of form

Reporting of Energy Generation for the year 1st January 2015 to 31st December 2015

Energy Source	Energy Usage		Energy generated/m ³ biogas (MWh/m ³)
	Quantity		
Electricity generation	1779MWh	0.001	
Heat generated	2338MWh	0.001	
TOTAL			

Operator's comments :

Signed Kathryn Fowler..... Date.....23/1/2016.....
(Authorised to sign as representative of Operator)

Form Number: W1

**Reporting of Emissions to Water (other than to Sewer) for the period from 30th September 2015 to 31st December 2015
(1st January 2015 to 31st December 2015 for metals)**

Emission Point	Substance / Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation / Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾
W2	Flow	10,000m ³ /day	5795	Continuous / cumulative – AAB flow meter	31 st December	MCerts accredited	+/- 1.04 %
W2	Flow	126 litres/s	62.79	Spot – AAB flow meter	7 th November	MCerts accredited	+/- 1.04 %
W2	pH	5 – 9 ⁽⁶⁾	7.1 – 8.8	Continuous sample	7 th October – 5 th October	EA approved (IP 18)	+/- 0.05 pH
W2	Temperature	30°C	24.8	Continuous sample – knick in line meter	6 th October	EA approved (IP 18)	+/- 1 degree C
W2	BOD	200mg/l	17	SCA Blue Book 130 ISBN 0117522120	22 nd October	UKAS Lab 1314	20.1%
W2	COD	450mg/l	91	SCA Blue Book 97 ISBN 0117519154	11 th October	UKAS Lab 1314	5.8%
W2	Suspended Solids	150mg/l	132	SCA Blue Book 105 ISBN 011751957X	11 th October	UKAS Lab 1314	19.7%
W2	Total cadmium & its compounds	0.005mg/l (as annual average)	0.0008	BS EN ISO 5961:1995, BS 6068-2.21:1995		UKAS Lab 1314	7.83%
W2	Total chromium & its compounds	0.015mg/l (as annual average)	0.003	BS EN ISO 11885:1998, BS 6068-2.60:1998		UKAS Lab 1314	7.93%
W2	Total copper & its compounds	0.01mg/l (as annual average)	0.007	BS EN ISO 11885:1998, BS 6068-2.60:1998		UKAS Lab 1314	9.03%
W2	Total mercury & its compounds	0.0005mg/l (as annual average)	0.0001	BS EN ISO 11885:1998, BS 6068-2.60:1998		UKAS Lab 1314	11.5%
W2	Total nickel & its compounds	0.03mg/l (as annual average)	0.006	BS EN ISO 11885:1998, BS 6068-2.60:1998		UKAS Lab 1314	8.82%
W2	Total zinc & its compounds	0.07mg/l (as annual average)	0.05	BS EN ISO 11885:1998, BS 6068-2.60:1998		UKAS Lab 1314	9.85%
W2	Total arsenic & its compounds	0.025mg/l (as annual average)	0.0031	BS EN 26595:1993, BS 6068-2.1:1983, ISO 6595-1985		UKAS Lab 1314	10.04%
W2	Total iron & its compounds	None (mg/l)	0.4	SCA Blue Book 163 ISBN 0117532444		UKAS Lab 1314	9.27%
W2	Total cadmium & its compounds	9150g	800	BS EN ISO 5961:1995, BS 6068-2.21:1995		UKAS Lab 1314	7.83%
W2	Total mercury & its compounds	915g	133	BS EN ISO 11885:1998, BS 6068-2.60:1998		UKAS Lab 1314	11.5%

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- [1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
- [2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. colorimetry.
- [3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements, or flow/time proportional samples, the percentage of the process operating time covered by the monitoring is given.
- [4] The accreditation status of the equipment and/or the monitoring organisation, as appropriate, for the methods used for both sampling and analysis.
- [5] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated. The following uncertainties are quoted on a different basis (basis as stated) – *{The basis of any other uncertainty figure needs to be stated. Where no figure is available the Agency will need to agree an appropriate uncertainty value.}*
- [6] The emission limit values for {pH} are expressed as {minimum and maximum individual values}.

Signed Kathryn Fowler.....
(authorised to sign as representative of the Operator)

Date.....23/1/2016.....

Form Number: WU1

Reporting of Water Usage for the year Jan 1st 2015 to December 31st 2015

Water Source	Usage (m ³)	Specific Usage (m ³ /t)
Spring water	1696846	3.71
Mains water	47770	0.10
TOTAL WATER USAGE	1744616	3.81

Year	Trends in Water Usage Parameter		
	Spring Water Source	Mains Water Source	Total Water usage
2005	2197934	16813	2214747
2006	2324340	13139	2337479
2007	2303437	17217	2320654
2008	2063466	19462	2082928
2009	1934551	21173	1955724
2010	2487347	29020	2516367
2011	1929724	35197	1964921
2012	1598898	38003	1636901
2013	1704598	41397	1745995
2014	1721398	35496	1756894
2015	1696846	47770	1744616

Operator's comments :

This is one of our Better World KPI's, and is a huge focus of the business.
Several initiatives and CAPEX have been identified to further reduce water usage in a sustainable manner, whilst maintaining the quality of our brands.

Signed Kathryn Fowler.....
(authorised to sign as representative of the Operator)

Date23/1/2016.....

Form Number: E1

Reporting of Energy Usage for the year Jan 1st 2015 to December 31st 2015

Energy Source	Energy Usage		CO ₂ Produced (tonnes)
	Quantity	Primary Energy (MWh)	
Electricity *	39695	95268	16196
Natural Gas	98943	98943	18799
Gas Oil	38014	400	100
TOTAL		194611	35095

* Conversion factor for delivered electricity to primary energy = 2.4

Trends in Energy Usage			
Year	Primary Energy usage	CO ₂ produced	CO ₂ per unit output
2005	229412	43030	Report on P11
2006	227217	42470	Report on P11
2007	234066	43253	Report on P11
2008	218651	40094	Report on P11
2009	206460	38506	Report on P11
2010	222367	42261	Report on P11
2011	214616	39697	Report on P11
2012	198037	35880	Report on P11
2013	185342	33131	Report on P11
2014	190552	34119	Report on P11
2015	194611	35095	Report on P11

Operator's comments :

The site is heavily focussed on better world targets including electricity and heat.
2015 Capex projects will be highlighted in the EMS document

Signed Kathryn Fowler.....
(authorised to sign as representative of the Operator)

Date.....23/1/2016.....

Form Number: PI1

Reporting of Performance Indicators for the year Jan 1st 2015 to December 31st 2015

Annual Production/Treatment	
Production of beers and lagers	457711 tonnes

Environmental Performance Indicators

Parameter	Annual Average	Units
BOD	0.050	kg/tonne
COD	0.27	kg/tonne
Water use	3.81	m ³ /tonne
Energy use	425	kWh/tonne
Carbon dioxide	0.076	tonne/tonne
Waste	0.043	tonne/tonne

Trends in Environmental Performance						
Year	Parameter		Water Use	Energy Use	CO ₂	Waste
	BOD	COD	m ³ /tonne	kWh/tonne	tonne/tonne	tonne/tonne
2005	kg/tonne	kg/tonne	4.86	504	0.020*	0.074
2006	0.104	0.450	5.31	516	0.021*	0.029
2007	0.021	0.256	5.90	600	0.024	0.042
2008	0.034	0.306	5.67	596	0.019	0.043
2009	0.058	0.378	4.63	489	0.020	0.039
2010	0.06	0.27	5.58	493	0.095	0.056
2011	0.08	0.33	4.57	499	0.092	0.069
2012	0.043	0.27	4.07	508	0.092	0.070
2013	0.029	0.22	4.31	457	0.08	0.050
2014	0.020	0.162	3.98	431	0.08	0.046
2015	0.0172	0.172	3.81	425	0.076	0.043
2015	0.050	0.27				

Operator's comments :

Signed Kathryn Fowler..... Date.....23/1/2016.....
(authorised to sign as representative of the Operator)

Reporting of Mass Release for the year Jan 1st 2015 to December 31st 2015.

Trends in Mass Release		
Year	Parameter	
	Ammonia (kg/annum)	
2005	1000	
2006	4000	
2007	1000	
2008	1000	
2009	1000	
2010	1000	
2011	0	
2012	1060	
2013	0	
2014	0	
2015	0	

Signed Kathryn Fowler.....
(authorised to sign as representative of the Operator)

Date.....23/1/2016.....

Form Number: R1

Reporting of Waste Disposal and Recovery for the year Jan 1st 2015 to December 31st 2015

Waste Description	Disposal Route	Tonnes	Recovery Tonnes
1) Hazardous Wastes			
Named haz. Waste	Neales Waste Management	44.68	14.89
Other hazardous wastes			
Total hazardous waste		44.68	14.89
2) Non-Hazardous Wastes			
Named non-haz. Waste	Neales Waste Management and n-virocycle	19403	19403
Other non-hazardous wastes			
Total non-hazardous waste			
TOTAL WASTE		19948	19418

Trends in Waste Disposal and Recovery			
Year	Named Waste	Total Waste	Waste per unit output
2005	33228	33562	Report on PI1
2006	12961	12961	Report on PI1
2007	16383	16383	Report on PI1
2008	15801	15801	Report on PI1
2009	16623	16623	Report on PI1
2010	25378	25378	Report on PI1
2011	32314	32314	Report on PI1
2012	28122	28122	Report on PI1
2013	19823	19823	Report on PI1
2014	20327	20327	Report on PI1
2015	19948	19448	Report on PI1

Operator's comments :

This waste is inclusive of sludge from our WWTP and onsite waste kiesulguhr tanks.
This waste figure is also inclusive of all site projects (including CDM which are governed through waste management plans). Initiatives for 2016 include de-watering of effluent sludge.

Signed Kathryn Fowler.....
(authorised to sign as representative of the Operator)

Date.....23/1/2016.....

Permit Number: EPR/BX72821S
Facility: Magor Brewery
Date of form 19/07/11

Operator: Inbev UK Ltd
Form Number: Gas1

Reporting of biogas quality for the year 1st July 2015 to 31st December 2015

Parameter	Result (ppm)
Hydrogen sulphide content at outlet of hydrogen sulphide scrubber	97
Hydrogen sulphide content at entry to gas engine	97

The result given is the maximum result over the reporting period

Operator's comments :

Signed Kathryn Fowler..... Date.....23/1/2016.....
(Authorised to sign as representative of Inbev UK Ltd)

