

Appendix 11: Environmental management system (EMS)



By Royal Charter

Certificate of Registration

ENVIRONMENTAL MANAGEMENT SYSTEM - ISO 14001:2015

This is to certify that:

WEPA UK Ltd
Bridgend Paper Mills
Llandynwyd
Bridgend
CF34 9RS
United Kingdom

Holds Certificate Number:

EMS 602885

and operates an Environmental Management System which complies with the requirements of ISO 14001:2015 for the following scope:

The manufacture and conversion of tissue paper in a range of consumer products, manufactured to in-house and/or customer specification and the storage and distribution of manufactured products.

For and on behalf of BSI:

Andrew Launn, EMEA Systems Certification Director

Original Registration Date: 2013-08-13

Effective Date: 2020-02-20

Latest Revision Date: 2020-02-04

Expiry Date: 2023-02-19



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A Member of the BSI Group of Companies.



By Royal Charter

Certificate of Registration

OCCUPATIONAL HEALTH & SAFETY MANAGEMENT SYSTEM - ISO 45001:2018

This is to certify that:

WEPA UK Ltd
Bridgend Paper Mills
Llandynwyd
Bridgend
CF34 9RS
United Kingdom

Holds Certificate Number:

OHS 602886

and operates an Occupational Health and Safety Management System which complies with the requirements of ISO 45001:2018 for the following scope:

Manufacture and conversion of tissue paper in a range of consumer and away from home products, manufactured to in-house and/or customer specifications.

For and on behalf of BSI:

Andrew Launn, EMEA Systems Certification Director

Original Registration Date: 2013-10-17

Effective Date: 2020-03-30

Latest Revision Date: 2020-02-10

Expiry Date: 2023-03-29



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Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 9001:2015

This is to certify that:

WEPA UK Ltd
Bridgend Paper Mills
Llandynwyd
Bridgend
CF34 9RS
United Kingdom

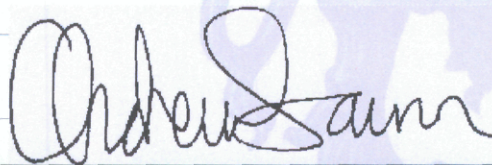
Holds Certificate Number:

FM 602884

and operates a Quality Management System which complies with the requirements of ISO 9001:2015 for the following scope:

The manufacture, conversion and storage of tissue paper in a range of consumer products, manufactured to in-house and/or customer specifications.

For and on behalf of BSI:



Andrew Launn, EMEA Systems Certification Director

Original Registration Date: 2013-08-13

Effective Date: 2019-09-10

Latest Revision Date: 2019-08-10

Expiry Date: 2022-09-09



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MCERTS Site Inspection Report

Report Prepared by: Trueflow Surveys Ltd

Consent/Permit Holder: Georgia Pacific GB Ltd

Site Name: Georgia Pacific Ltd Bridgend

Site Address: Llangynwyd
Bridgend
Mid Glam

Site Ref/Postcode: CF34 9RS

Grid Ref: SN882873

Inspection Report No: TFS220/D1/1

Consent/Permit No: BJ5805 IX

Date of Site Inspection: 11/04/11

Site Contact David Lomax
Tel: 01656 684500

Audit Carried out by: O Bright

Audit Checked by: D Bright

Trueflow Surveys Ltd
Windcliffe
Sutton Lane
Ogmore by Sea
Bridgend
CF32 0PE
email: dennis@trueflow.co.uk
web: www.trueflow.co.uk

Summary of Audit Findings

The site at Georgia Pacific GB Ltd Bridgend was originally issued with an MCERTS certificate in May 2006. This report details the MCERTS site inspection to re-certify the installation undertaken in April 2011. The inspection was commissioned by Georgia Pacific UK Ltd through SIRA Environmental.

The paper mill discharges treated effluent to the River Llynfi. The effluent treatment plant includes facilities for recording the flow rates of the effluent discharged to the river and for effluent that is recycled for further use at the plant.

Flow rates are measured using two rectangular weirs that have been fitted with Endress and Hauser Prosonic FMU 861 ultrasonic flow measurement instruments. The weirs are in good condition and have been fitted with new stainless steel thin plate weirs in accordance with BS ISO 1438:2008.

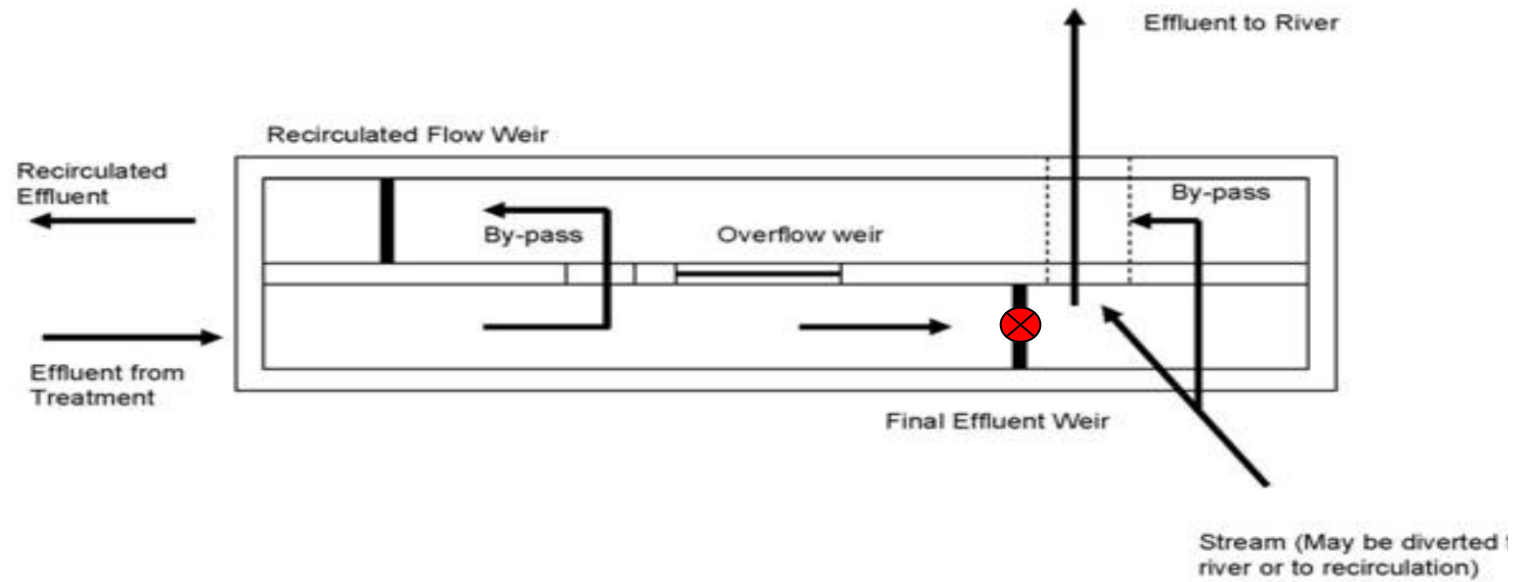
Calibration checks carried out at the time of the audit show that the flow measurement instruments are correctly set up and are capable of measuring flow rates to the required accuracy levels. There is no double counting of effluent flow due to the monitoring location.

Maintenance procedures appeared to be adequate at the time of the inspection.

The installation is considered to meet the site requirements for MCERTS certification.

<i>Overall maximum uncertainty</i>	<i><4.81 %</i>
<i>QMS certification No</i>	<i>N/A</i>
<i>Maintenance procedures adequate?</i>	<i>Yes</i>
<i>Meets MCERTS site audit requirements</i>	<i>Yes</i>

Schematic



Schematic Layout of Effluent Channels



MCERTS Measurement Location

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1.0 SURVEY INFORMATION

Date/Time	02/03/11	Next Calibration Due
Level Serial No	58882	23/06/11
Trueflow Surveying Staff	Ref TF11	01/09/11
Trueflow Steel Rule	Ref TF3	01/09/11
Tape measure Serial No	Ref TF2	01/09/11
Weather/Personnel	Dry	D Bright, O Bright

2.0 SITE INFORMATION

Site Name	Georgia Pacific GB Ltd Bridgend
Site Address	Llangynwyd, Bridgend, Mid Glam, CF34 9RS
Consent Holder	Georgia Pacific GB Ltd
Consent / PPC Number	BJ5805 IX
Location of Measurement Structure	Final Effluent
Type of Measurement Structure	Rectangular thin plate weir
Measurement Device	Ultrasonic
Method of Recording	SCADA

2.1 Flow Rate Information

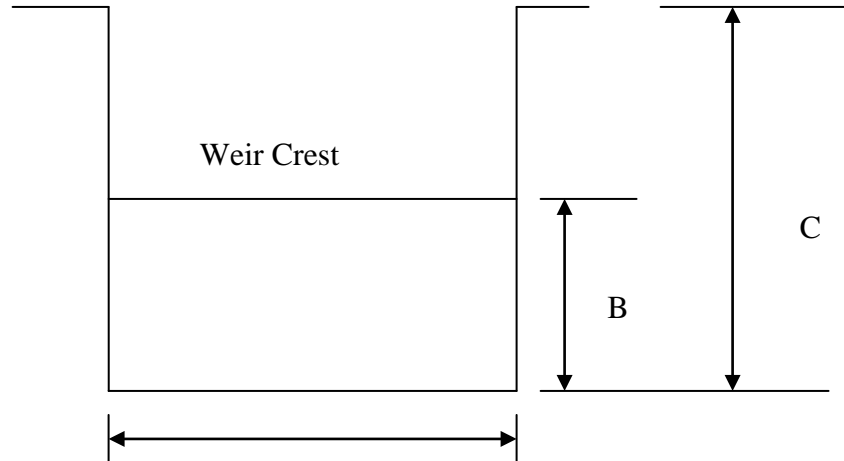
Consented DWF	N/A
Consented Qmax (daily)	17,500 m³/day
Consented instantaneous Qmax	N/A
Flow rate at time of audit	1176 m³/day
Average flow from scum marks	N/A
Maximum flow from scum marks	N/A

Design Values

Q min meter	< 2000 m³/day	
Q max meter	> 21,000 m³/day	<i>1.2 times maximum consented value</i>

3.0 MEASUREMENT INSTALATION ASSESSMENT

3.1 Rectangular Weirs- on Site Measurements



Measurement.		<i>Effluent Weir</i>	<i>Recirc Weir</i>
A	Weir Width	810	810
B	Weir Height	402	291
C	Channel Height	1210	1210
	Weir thickness	2	2

	<i>Effluent Weir</i>	<i>Recirc Weir</i>
Height	1210	1210
Width	810	810
Scum line: normal	N/A	N/A
Scum line: maximum	N/A	N/A
Overall length of chamber	13650	13650
Uninterrupted approach	4800	4800
Sensor location	1480	1480
Sensor height	1210	1210

3.2 Measurement Instrument

	Effluent Weir	Recirculation Weir
Manufacturer	Endress and Hauser	Endress and Hauser
Model Number	Prosonic FMU 861	Prosonic FMU 861
Serial No	9XR0250 EP18 (FE)	N/A9XR0249 EP18
Maximum Range	1250 m3/hour	1250 m3/hour
Calculation method	Absolute	Absolute
Weir Width	0.810 m	0.810 m
Sensor Height	1.197 m	1.218 m
Empty Distance	0.842 m	0.934 m
Weir Type	1	1

Calibration Measurement Checks

	Effluent Weir	Recirculation Weir
Datum Level	0.823 m	0.985
Measured Level	0.120	0.112
Indicated Level	0.121	0.111

Notes.

1. No additional factors were identified that could impact on measurement accuracy during the lifetime of this certification.
2. No adverse hydraulic conditions or disturbances were noted within the area of influence of the flow meter.
3. Site maintenance arrangements appear to be adequate to ensure that the accuracy of the measurement installation is maintained.

3.3 Rectangular Weir Assessment

Rectangular Weir Assessment

Final Effluent Weir

Installation Details			
Consented Q max m ³ /day	17,500	Consented Q max l/s	203
Max Design Range l/s	243	Actual max range	347
Min Design Range l/s	23.2	Actual min range	16.89
Maximum head h _{max} m	0.287	Minimum head h _{min} m	0.05
Weir Width	0.810 m	Notch thickness mm	2
Weir height	0.355	Chamber width B	0.81
Height of zero above bed "p"	0.355	Chamber Length L	5000
Distance to sensor	1.48	Sensor Dead Band	N/R
Range at Zero head	0.855	Available head range	N/A

BSISO 1438:2008 Limitations

Kindsvarter Carter	Standard	Installation	Pass/Fail
Weir width	> 0.20 m	0.81	Pass
Plate edge thickness	1 to 2 mm	2 mm	Pass
Head Gauging	2 to 4 times h max*	5.2	Pass
Chamber width m	Should be > 0.15 m	0.81	Pass
p	Should be > 0.10 m	0.355	Pass
h/p	Should be < 2.5	0.808	Pass
h	Should be > 0.030 m	> 0.050	Pass
Common Limitations			
Verticality of weir	Must be vertical*	Vertical	
Weir plate deflection	Must be straight*	Straight	
Amount of skew	Must be square*	Square	
Centrality of weir	Must be central*	Central	
Deviation of weir from a horizontal plane	Must be true and level*	Level	
Approach channel level (in direction of flow)	Must be level*	Level	

Rectangular Weir Assessment

Recirculation Weir

Installation Details			
Consented Q max m ³ /day	17,500	Consented Q max l/s	203
Max Design Range l/s	243	Actual max range	347
Min Design Range l/s	23.2	Actual min range	16.89
Maximum head h _{max} m	0.287	Minimum head h _{min} m	0.05
Weir Width	0.810 m	Notch thickness mm	2
Weir height	0.284	Chamber width B	0.81
Height of zero above bed "p"	0.284	Chamber Length L	5000
Distance to sensor	1.48	Sensor Dead Band	N/R
Range at Zero head	0.855	Available head range	N/A

BSISO 1438:2008 Limitations

Kindsvarter Carter	Standard	Installation	Pass/Fail
Weir width	> 0.20 m	0.81	Pass
Plate edge thickness	1 to 2 mm	2 mm	Pass
Head Gauging	2 to 4 times h max*	5.2	Pass
Chamber width m	Should be > 0.15 m	0.81	Pass
p	Should be > 0.10 m	0.284	Pass
h/p	Should be < 2.5	1.011	Pass
h	Should be > 0.030 m	> 0.050	Pass
Common Limitations			
Verticality of weir	Must be vertical*	Vertical	
Weir plate deflection	Must be straight*	Straight	
Amount of skew	Must be square*	Square	
Centrality of weir	Must be central*	Central	
Deviation of weir from a horizontal plane	Must be true and level*	Level	
Approach channel level (in direction of flow)	Must be level*	Level	

3.4 Dry Day Diurnal Flow Pattern and Uncertainty

Measurement Uncertainty

Software version Rectangular Full width Weir V1.1 January 2010

Spreadsheet for calculating stage discharge relationship

for a Full Width Weir to BS ISO 1438: 2008

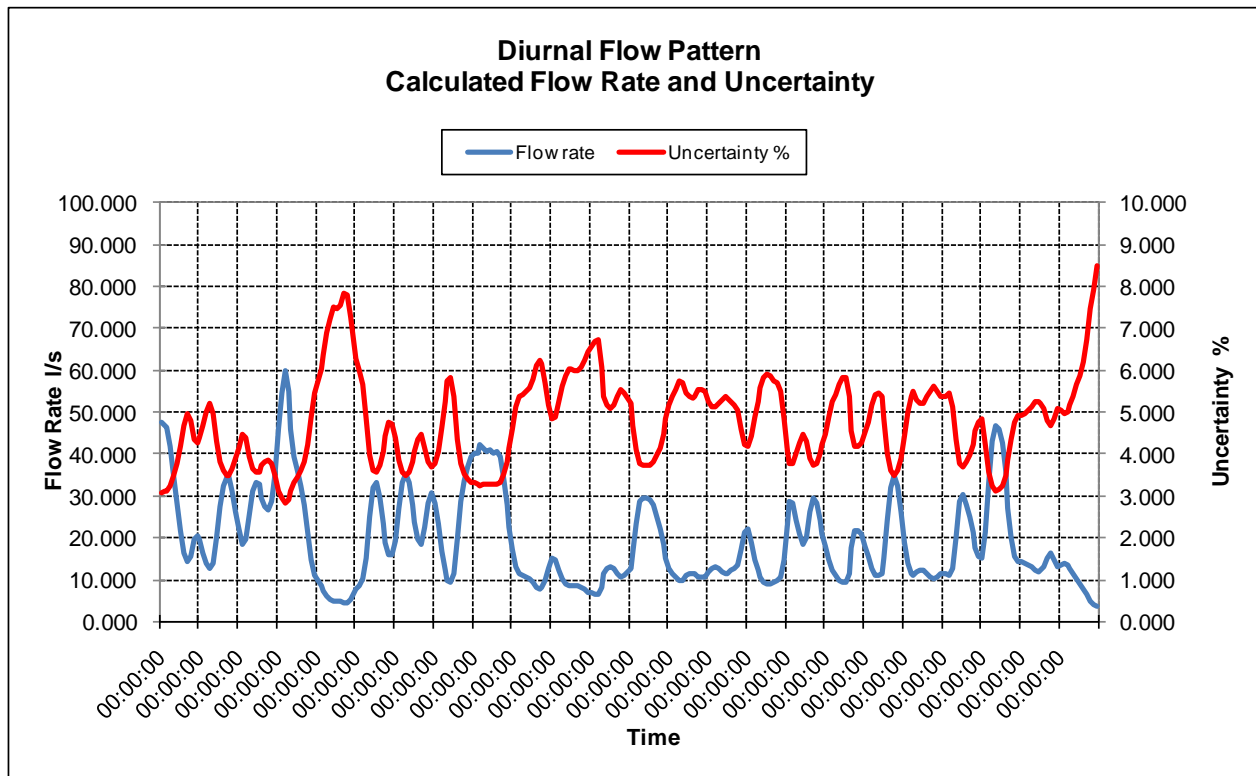
b (m) =	0.810	h/p not greater than 1 h not greater than 0.80 m
P (m) =	0.355	

Uncertainties

Standard Dev h	0.050	mm	For h/p <1
Cd	1.500	%	
Error in head	1.000	mm	
Error in zero	1.000	mm	
Error in width	0.500	mm	
Head correction	0.3	mm	
Width correction	0.3	mm	

Head	Flow (l/s)	C	Error in Cd %	Xbe %	Xhe %	Xq %
0.025	6.045	0.6395013	1.50	0.07	5.80	8.82
0.030	7.908	0.6363882	1.50	0.07	4.83	7.40
0.050	16.890	0.6316962	1.50	0.07	2.90	4.60
0.070	27.994	0.6320478	1.50	0.07	2.07	3.45
0.090	40.965	0.6344292	1.50	0.07	1.61	2.84
0.103	50.324	0.6365803	1.50	0.07	1.41	2.59
0.130	71.957	0.6419338	1.50	0.07	1.11	2.25
0.150	89.801	0.6463654	1.50	0.07	0.97	2.09
0.170	109.127	0.6510140	1.50	0.07	0.85	1.97
0.190	129.884	0.6557780	1.50	0.07	0.76	1.89
0.210	152.029	0.6605874	1.50	0.07	0.69	1.82
0.230	175.525	0.6653930	1.50	0.07	0.63	1.77
0.250	200.335	0.6701597	1.50	0.07	0.58	1.74
0.270	226.427	0.6748625	1.50	0.07	0.54	1.70
0.287	249.592	0.6787963	1.50	0.07	0.50	1.68
0.310	282.341	0.6840110	1.50	0.07	0.47	1.66
0.330	312.106	0.6884359	1.50	0.07	0.44	1.64
0.350	343.043	0.6927531	1.50	0.07	0.41	1.63
0.370	375.127	0.6969595	1.50	0.07	0.39	1.61
0.390	408.334	0.7010535	1.50	0.07	0.37	1.60

Dry Day Diurnal Flow Pattern and Uncertainty



Average Flow l/s	5-min volume (m3)	Cumulative Volume (m3)	Uncertainty (+/-%)	Uncertainty Based on Daily Volume %
59.889	17.967		8.468	0.031
3.556	1.067		2.831	0.005
19.304	5.821		4.775	0.015
N/A	1676.349	1676.349	N/A	4.26

Rectangular Full width Weir and Prosonic FMU 861	Uncertainties
Calculated overall uncertainty from diurnal flow pattern	4.26
Assessed risk of fouling(Surface deposition)*	2.00
Overall meter uncertainty (In Quadrature)	4.71
Declared telemetry conversion error as detailed in QMS	1.00
Overall meter and telemetry uncertainty (In Quadrature)	4.81
Any additional errors due to over or undercounting of flows**	0.00
Overall measurement uncertainty	4.81
* Impact assessed by inspector.	
**Volume is given as a % of Consented DWF	

Uncertainty Calculations

Uncertainty calculations in this report are based on the following assumptions:-

- Maximum measurement uncertainty is taken to occur at the minimum flow rate.
- If a site is fully pumped, then the measurement uncertainty will be based on the typical pumping rate.
- Telemetry and data transmission uncertainty is controlled by procedures contained within the Quality Management System
- Where the maximum measurement uncertainty is $< 7.0 \%$, it is not considered necessary to produce a diurnal flow pattern and uncertainty calculation.
- Where a diurnal flow and uncertainty pattern is required and no flow data has previously been recorded, an estimated diurnal flow pattern will be provided and uncertainty calculations will be based on this estimated pattern. The total daily discharge for the diurnal flow pattern will be based on the consented dry weather flow discharge. The maximum flow rate will be taken to be twice the mean flow rate and the minimum flow rate will be taken to be half the mean flow rate.
- Uncertainty values for flume and v-notch installations will be derived in accordance with BS ISO 4359: 1983 and BS ISO 1438: 2008. Allowance will be made for the uncertainty of the secondary device in line with the manufacturer's specifications.
- Uncertainty of magflow meters will be based on the product sizing software provided by the manufacturers used in conjunction with the manufacturer's calibration certificate.
- Manufacturer's magflow calibration certificates will be provided for each meter.
- Where more than one measurement installation is used to derive the total discharge, the overall uncertainty calculations will be pro rata based on the proportion of flow measured by each installation.
- Where there is "double counting" of process return liquors, the volume of the liquors will be based on information provided by the discharger.
- Any error due to "double counting" will be added to the calculated overall measurement uncertainty value. It should be noted that the error due to "double counting" will always be positive, and lead to an overestimation of the true flow rate.

4.0 DATA TRAIL / DATA INSPECTION

The Quality Management System (QMS) drawn up by Georgia Pacific UK Ltd includes procedures to cover the collection, processing and reporting of flow data from the site.

The procedures have been inspected previously by SIRA Environmental and found to meet the MCERTS requirements.

Appendix 1 Photographs

Final Effluent Weir



Recirculation Weir



Flow Meter Converters

