

## Reporting of Energy Usage for year 2021

Permit Number: LP3731SU

Operator: BAE Systems Land Systems  
(Munitions& Ordnance) Ltd

Installation: Glascoed Munitions Factory

Form Number: Energy 1  
Form Issue Date: 03/11/2006

Energy Source	Energy Usage Quantity	Primary Energy	Specific Usage
Electricity (1)	MWh	747	0.0178 MWh/tonne of steam produced (29.83MJ/tonne of steam)
Natural Gas (2)	MJ	188,531,829	4492 MJ/tonne of steam produced
Gas Oil (boilers) (3)	MJ	625,254	14.90 MJ/tonne of steam produced
Diesel usage(Back-up generator)(4)	MJ	40,334	0.96 MJ/tonne of steam produced
<b>TOTAL</b>	<b>MJ</b>	<b>189,198,164</b>	<b>4507 MJ/tonne of steam produced</b>

### Operator's comments

Note 1 Conversion factor for delivered electricity to primary energy (x2.4)

Note 2 4,634,879.8262m<sup>3</sup> of natural gas consumed, (conversion factors from Department of Energy and Climate Change - Digest of UK Energy Statistics 2011 Natural gas = 11.3kWh/m<sup>3</sup> and 1MJ = (1kWh/0.2778)). The gas meter was not operational for half of 2021 and has since been replaced. The Procedure and Methodology for Data Gap Closure in BAE Glascoed's Greenhouse Gas Permit (UK-W-IN-11615) was used for this period.

Note 3 15,950 litres of gas oil consumed in boilers, diesel/gas oil = 10.89kWh/litre (source: Department of Energy and Climate Change - Digest of UK Energy Statistics 2011) and 1MJ = (1kWh/0.2778)

Note 4 1028.9 litres of gas oil (generator) consumed, diesel/gas oil = 10.89kWh/litre (source: Department of Energy and Climate Change - Digest of UK Energy Statistics 2011) and 1MJ = (1kWh/0.2778)

Signed

(authorised to sign as representative of Operator)

Date 28.01.2022

## Reporting of Water Usage for year 2021

Permit Number: LP3731SU

Operator: BAE Systems Land Systems  
(Munitions & Ordnance) Ltd

Installation: Glascoed Munitions Factory

Form Number: Water Usage1  
Form Issue Date: 03/11/2006

Water Source	Usage m <sup>3</sup> /year	Specific Usage
River Abstraction	1,046,891	
Boiler House Use	34,329	0.82 m <sup>3</sup> /tonne of steam produced

### Operator's comments

34,329 m<sup>3</sup> of water was used in the Boiler house representing 3 % of the total water abstracted given above

Signed



Date 28.01.2022

(authorised to sign as representative of Operator)

**Releases to Air**

**PPC Reporting**

**Operational Summary for the year to December 2021**

Operator: BAE Systems Land Systems  
(Munitions & Ordnance)Ltd

Site Location: Glascoed, Usk

Form Number: Air - 8 (Discontinuous Monitoring)

Form Issue Date: 03/11/2006

Permit/Variation number: LP3731SU

Release point: A1 & A2

Measurement frequency: 12monthly

Date of sampling : A1 Boiler 1 : 08/12/2021  
A1 Boiler 2 Left: 08/12/2021  
A1 Boiler 2 Right: 07/12/2021  
A2: 07/12/2021

Release Point	Flue	ELV mg/m <sup>3</sup>	Measured value mg/m <sup>3</sup>	Sampling method	Unit load	Fuel usage
					or	during
					%MCR	sampling
A1	Boiler 1	140	95.66	BS EN 14792:2017	90-100%	Natural Gas
	Boiler 2 Left	140	98.6	BS EN 14792:2017	90-100%	Natural Gas
	Boiler 2 Right	140	89.67	BS EN 14792:2017	90-100%	Natural Gas
A2	Boiler 3	140	86.16	BS EN 14792:2017	90-100%	Natural Gas
	Boiler 4 Left	140	*	BS EN 14792:2017	90-100%	Natural Gas
	Boiler 4 Right	140	*	BS EN 14792:2017	90-100%	Natural Gas

Notes: \* denotes that the process was not operational so sampling could not be undertaken.

Signed on behalf of the Operator

Date 28.01.2022

### Reporting of other performance indicators for the period 01/01/2021 to 31/12/2021

Permit Number: LP3731SU Operator: BAE Systems Land systems (Munitions& Ordnance) Ltd  
 Installation: Glascoed Munitions Factory Form Number: Performance 1  
 Form Issue Date: 03/11/2006

Parameter	Units
Steam Generated	<b>41,975</b> tonnes per annum
Annual waste production	<b>0.020</b> tonnes per annum

Environmental Performance Indicators	
Electricity	<b>0.0178</b> MWh/tonne of steam produced (29.93MJ/tonne of steam)
Natural Gas	<b>4492</b> MJ/tonne of steam produced
Gas Oil (boilers)	<b>14.90</b> MJ/tonne of steam produced
Diesel usage(Back-up generator)	<b>0.96</b> MJ/tonne of steam produced
Total Energy	<b>4507</b> MJ/tonne of steam produced
Waste Production	<b>0.0005</b> kg/tonne of stream produced

**Operator's comments**

Signed

(authorised to sign as representative of Operator)

Date 28.01.2022

## Reporting of Waste Disposal for year 2021

Permit Number: LP3731SU

Operator: BAE Systems Land Systems  
(Munitions& Ordnance) Ltd

Installation: Glascoed Munitions Factory

Form Number: Waste 1  
Form Issue Date: 03/11/2006

Waste Description	Units	Quantity Disposed	Disposal Route
Refractory Waste	kg	0.0	Landfill
Boiler Soot	kg	0.0	Landfill
Boiler Sludge	kg	19.7	Landfill
<b>TOTAL</b>	<b>kg</b>	<b>19.7</b>	

Operator's comments

Signed



(authorised to sign as representative of Operator)

Date 28.01.2022

## Reporting of Waste Disposal for Quarter 1 (Jan/Feb/Mar 2021)

Permit Number: LP3731SU

Operator: BAE Systems Land Systems  
(Munitions& Ordnance) Ltd

Installation: Glascoed Munitions Factory

Form Number: Waste Q1  
Form Issue Date: 03/11/2006

Waste Description	Quantity Disposed (kg)	Disposal Route
Refractory Waste	0.0	n/a
Boiler Soot	0.0	n/a
Boiler Sludge	19.7	Landfill
<b>TOTAL</b>	<b>19.7</b>	

Operator's comments

Signed



(authorised to sign as representative of Operator)

Date 28.01.2022

## Reporting of Waste Disposal for Quarter 2 (Apr/May/Jun 2021)

Permit Number: LP3731SU

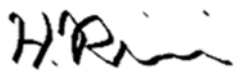
Operator: BAE Systems Land Systems  
(Munitions& Ordnance) Ltd

Installation: Glascoed Munitions Factory

Form Number: Waste Q2  
Form Issue Date: 03/11/2006

Waste Description	Quantity Disposed (kg)	Disposal Route
Refractory Waste	0.0	n/a
Boiler Soot	0.0	n/a
Boiler Sludge/Scale	0.0	n/a
<b>TOTAL</b>	<b>0.0</b>	

**Operator's comments**

Signed 

(authorised to sign as representative of Operator)

Date 28.01.2022

### Reporting of Waste Disposal for Quarter 3 (Jul/Aug/Sept 2021)

Permit Number: LP3731SU

Operator: BAE Systems Land Systems  
(Munitions& Ordnance) Ltd

Installation: Glascoed Munitions Factory

Form Number: Waste Q3  
Form Issue Date: 03/11/2006

Waste Description	Quantity Disposed (kg)	Disposal Route
Refractory Waste	0.0	n/a
Boiler Soot	0.0	n/a
Boiler Sludge	0.0	n/a
<b>TOTAL</b>	<b>0.0</b>	

Operator's comments

Signed



(authorised to sign as representative of Operator)

Date 28.01.2022

## Reporting of Waste Disposal for Quarter 4 (Oct/Nov/Dec 2021)

Permit Number: LP3731SU

Operator: BAE Systems Land Systems  
(Munitions& Ordnance) Ltd

Installation: Glascoed Munitions Factory

Form Number: Waste Q4  
Form Issue Date: 03/11/2006

Waste Description	Quantity Disposed (kg)	Disposal Route
Refractory Waste	0.0	n/a
Boiler Soot	0.0	n/a
Boiler Sludge	0.0	n/a
<b>TOTAL</b>	<b>0.0</b>	

**Operator's comments**

Signed



(authorised to sign as representative of Operator)

Date 28.01.2022