



**ANNUAL IMPROVEMENT TARGETS  
SUMMARY REPORT –  
REPORTING YEAR 2023**

**BAE SYSTEMS**

**GLASCOED MUNITIONS FACTORY,  
GLASCOED, USK, MONMOUTHSHIRE,  
NP15 1XL**

**PERMIT REFERENCE EPR/LP3731SU**

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## ACRONYMNS/ABBREVIATIONS IN THE TEXT

IMS	Integrated Management System
BAE Glascoed	BAE Systems Glascoed Munitions Factory
ECL	Environmental Compliance Limited
KPI	Key Performance Indicator
NRW	Natural Resources Wales

## 1. Introduction

- 1.1. The following report has been produced in accordance with Condition 4.2.1.(b) of Environmental Permit Reference LP3731SU. Conditions 4.2.1.(b) states:  
*“A report or reports on the performance of the activities over the previous year shall be submitted to the Agency [now Natural Resources Wales (“NRW”)] by 31<sup>st</sup> January or other date agreed in writing by the Agency each year. The report shall include as a minimum:  
(b) where the operator’s management system encompasses annual improvement targets, a summary report of the previous year’s progress against such targets.”*
- 1.2. BAE Systems Glascoed Munitions Factory (“BAE Glascoed”) has an Integrated Management System (“IMS”) which includes the setting and monitoring of key performance indicators (“KPIs”) to achieve continual environmental improvement.
- 1.3. The summary report below discusses the set environmental KPIs, strategies undertaken to achieve the KPIs, the observed performance against each target in 2023 and any limitations encountered.

## 2. KPI Performance

### 2.1. Gas Consumption

2.1.1. BAE Glascoed set a target to reduce gas consumption by 2% in 2023 compared to 2023 forecast figures.

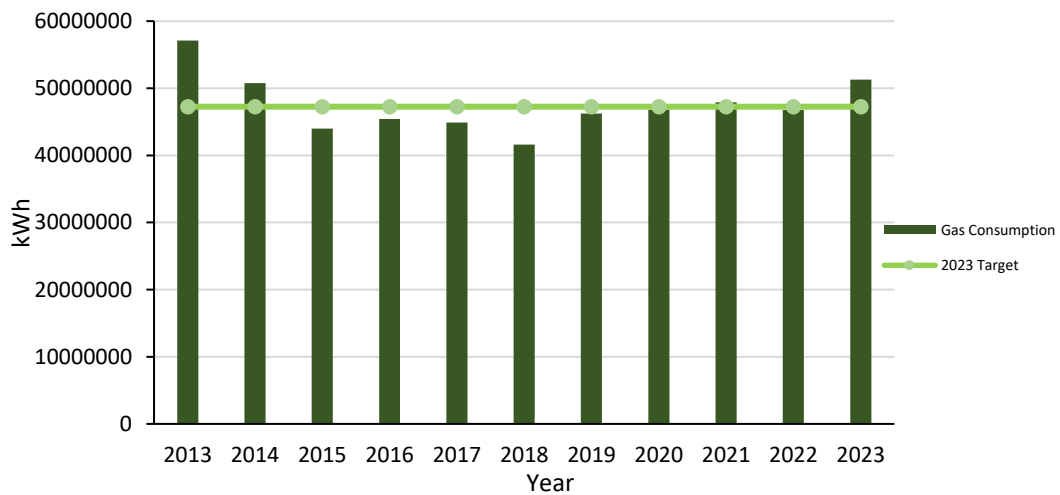
2.1.2. The following strategies have been implemented to reduce gas consumption at the site:

- installation of a number of steam meters integrated into the Building Management System was undertaken in 2018 and readings from the steam meters are analysed in order to identify potential targeted energy saving projects;
- the ongoing project related to steam rationalisation on the feed to a 24 hour process building (8E13).; and
- a project within the Net Zero Carbon programme has begun to reduce steam distribution and therefore gas consumption at Glascoed. The installation of a number of zoning valves across production groups will give more flexibility and give specific distribution to processes. This project began mid 2023 with completion planned mid-2024.

2.1.3. A gas consumption target of 47,255,600kWh was set for 2023. This figure was a 2% reduction from the 2023 forecast data of 48,220,000kWh based on the manufacturing plan.

2.1.4. Gas consumption for the last 11 years is shown below in Figure 1, together with the target of 47,255,600kWh.

**Figure 1: BAE Glascoed Gas Consumption – 2013-2023**



2.1.5. The data in Figure 1 shows BAE Glascoed were unable to achieve the 2% target set for 2023 when compared to the 2023 forecast.

2.1.6. The actual gas consumption in 2023 of 51,303,819kWh compared to the 47,255,600kWh target for 2023 shows an 8.6% increase. This is due to delays in the removal of asbestos and existing pipework which affected the installation of the zoning valves as part of the Net Zero Carbon programme. Further issues with pipework have also been experienced.

2.1.7. A target of 2% decrease on the 2024 forecast gas consumption has been set for 2024.

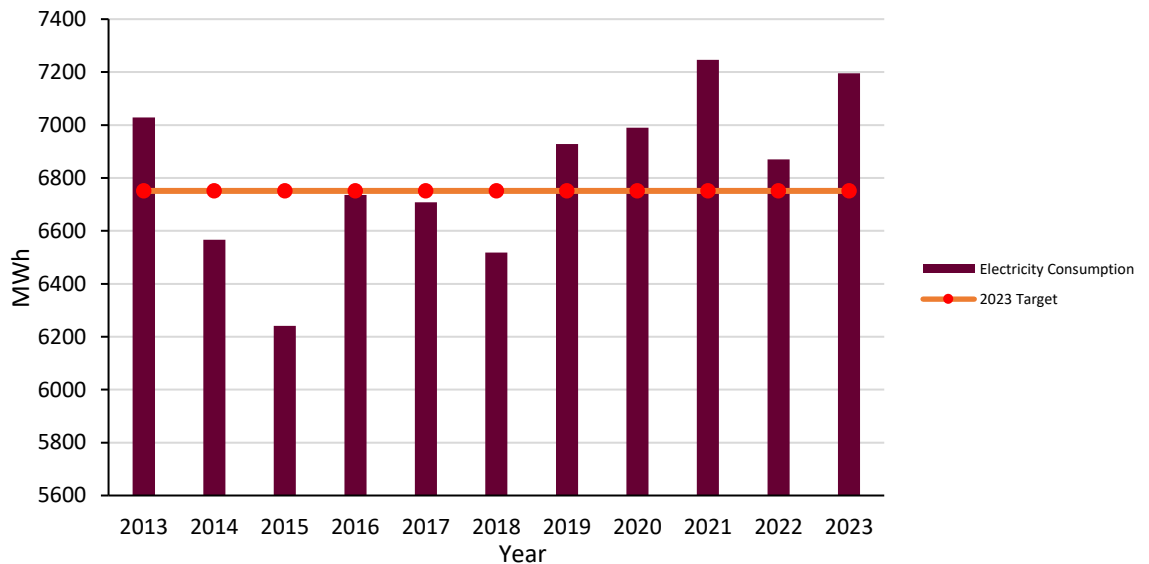
**2.2. Electricity Consumption**

2.2.1. BAE Glascoed set a target to reduce electricity consumption by 2% in 2023 compared to the 2023 forecast data.

2.2.2. In order to reduce electricity consumption at the site, BAE Glascoed continued to install energy efficient lighting as identified by analysis of metered data. Electrical consumption within the boiler house has remained relatively stable, however, a focus on reduction in the wider site consumption by reducing pumping time for boiler make up water has been implemented.

2.2.3. Electricity consumption for the last 11 years is shown below in Figure 2, together with the target of 6,751.024MWh.

**Figure 2: BAE Glascoed Electricity Consumption – 2013-2023**



2.2.4. The data in Figure 2 shows BAE Glascoed have been unable to achieve the 2023 target of 6,751.024MWh. The actual electricity consumption in 2023 of 7,195.872MWh was 6.5% above the target figure.

2.2.5. BAE Systems have confirmed that the total site electrical consumption has increased, however, there have been reductions for specific processes.

2.2.6. A target representing a 2% decrease from the 2024 forecast electricity consumption has been set for 2024.

**2.3. Water Consumption**

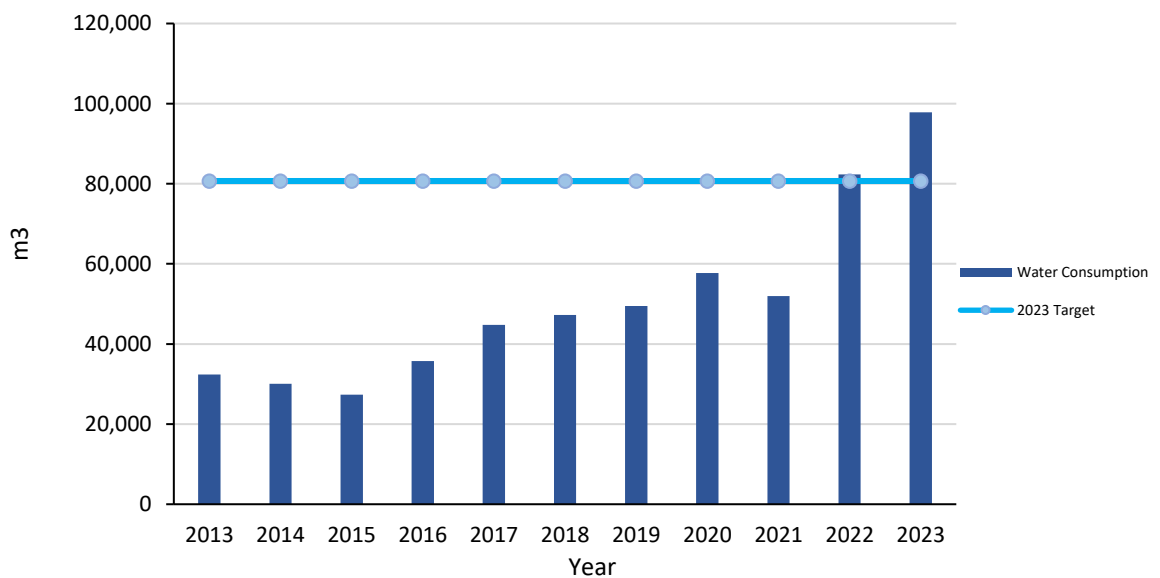
2.3.1. BAE Glascoed set a target to reduce water consumption by 2% in 2023 compared to 2022 measured data.

2.3.2. The following strategies were implemented to reduce water consumption at the site:

- continued leak detection; and
- monitoring of the base load which has been integrated into the Building Management System.

2.3.3. Water consumption for the last 11 years is shown below in Figure 3, together with the target of 80,689m<sup>3</sup>.

**Figure 3: BAE Glascoed Water Consumption – 2013- 2023**



2.3.4. The data in Figure 3 shows BAE Glascoed was unable to achieve the 2023 target. The observed water consumption in 2023 of 97,805m<sup>3</sup> compared to the actual consumed water of 82,336m<sup>3</sup> in 2022 demonstrates an increase of 18.8%.

2.3.5. The increase compared to 2022 usage can be accounted for by a number of substantial fire water and domestic water leaks which have been repaired in 2023. Consequently, water consumption in 2024 is anticipated to decrease because of the successful repairs completed in 2023.

2.3.6. A water consumption target of 95,848.9m<sup>3</sup> has therefore been set for 2024, this represents a 2% decrease based on 2023 measured data.

### **3. Conclusion**

- 3.1. As part of BAE Glascoed's IMS, annual improvement targets are set to enhance environmental performance and achieve continual improvement. The targets which were set in 2023 related to gas, electricity and water consumption aiming to achieve a reduction of 2% for gas and electricity in comparison to 2023 forecast figures and 2% for water in comparison to 2022 actual performance.
- 3.2. Unfortunately, BAE Glascoed were unable to achieve the set KPI for gas, electricity and water consumption in 2023. Delays in the Net Zero Carbon programme meant that results were not actualised in 2023, however, the benefits of the programme should be experienced in 2024. Furthermore, significant water leaks resulted in a much greater water consumption than anticipated, however, the repairs have been undertaken and the consumption is set to reduce in 2024.
- 3.3. Following evaluation of the performance in 2023, new KPIs have been set for 2024. A reduction of 2% has been set for gas and electricity based on forecast data and water consumption against 2023 actual consumption data.
- 3.4. The performance of 2024 will be discussed and interpreted based on the actual performance data for gas, electricity and water as part of next year's annual returns reporting.