

**ANNUAL IMPROVEMENT TARGETS SUMMARY  
REPORT PREPARED IN COMPLIANCE WITH  
CONDITION 4.2.1b. OF PPC PERMIT LP3731SU**

**BAE SYSTEMS LAND SYSTEMS  
(MUNITIONS & ORDNANCE) LTD.  
GLASCOED MUNITIONS FACTORY**

Prepared for:

**BAE SYSTEMS (GLASCOED)**

**FEBRUARY 2017**

Prepared by:

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|---------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Report Reference Number:</b> |                                                                                     | P1959/R001                                |                                                                                       |
| <b>Report Issue:</b>            |                                                                                     | Final                                     |                                                                                       |
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| <b>Date:</b>                    | February 2017                                                                       | <b>Date:</b>                              | February 2017                                                                         |

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**TABLE OF CONTENTS**

| <b>Section</b>                                  | <b>Page</b> |
|-------------------------------------------------|-------------|
| 1. <b>INTRODUCTION</b>                          | 1           |
| 2. <b>KEY PERFORMANCE INDICATOR PERFORMANCE</b> | 2           |
| 2.1. Gas Consumption                            | 2           |
| 2.2. Electricity Consumption                    | 3           |
| 2.3. Water Consumption                          | 4           |
| 3. <b>CONCLUSION</b>                            | 5           |

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**1. INTRODUCTION**

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- 1.1.** The following report has been produced in accordance with Condition 4.2.1(b). of Permit number LP3731SU. Condition 4.2.1.(b) is as follows:

*“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 Glascoed Munitions Factory (“BAE Glascoed”) has an Integrated Management System (“IMS”) which includes the setting and monitoring of key environmental performance indicators (“KPIs”) to achieve continual environmental improvement.

- 1.3.** The summary report below discusses the environmental KPIs set, strategies undertaken to achieve the KPIs, the observed performance against each target in 2016 and the successes and limitations encountered during the year.

## 2. KEY PERFORMANCE INDICATOR PERFORMANCE

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### 2.1. Gas Consumption

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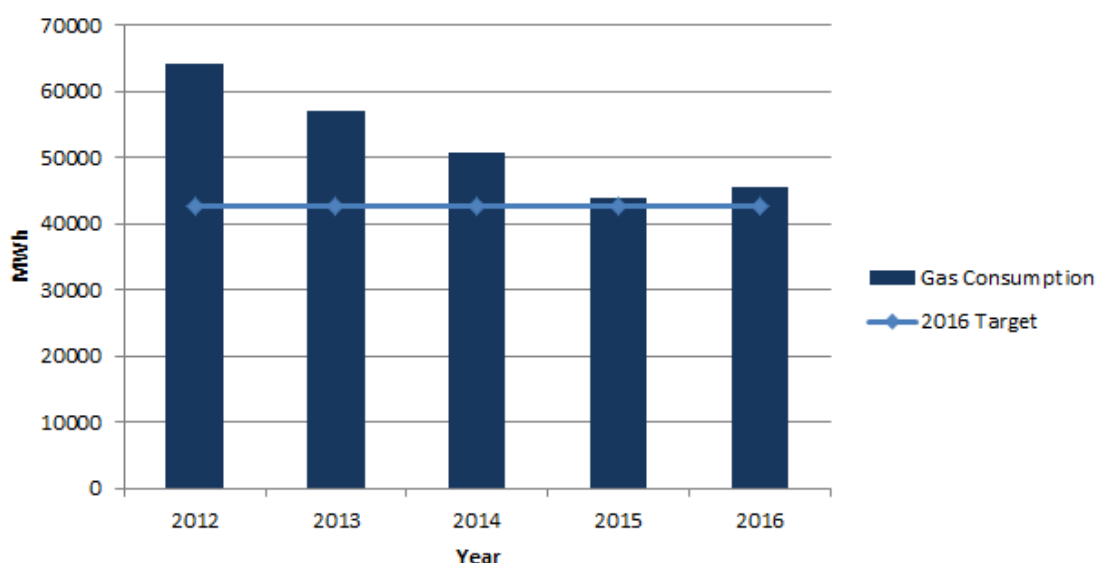
2.1.1. BAE Glascoed set a target to reduce gas consumption by 3% in 2016 compared to 2015 performance.

2.1.2. The following strategies were implemented during 2016 to reduce gas consumption at the site:

- delivery of the remaining elements for the steam control system upgrade;
- investigations into the feasibility of Tier 2 steam metering across site; and
- continuation and development of the steam order and delivery system.

2.1.3. Gas consumption for the last 5 years is shown below in Figure 1, together with the 2016 target of 42,682 MWh.

**Figure 1: Gas Consumption 2012 – 2016**



2.1.4. The data in Figure 1 shows that BAE Glascoed did not meet the 2016 target. A greater number of instances of frost protection were required at the site in comparison to 2015. In addition, there were a number of occasions where a valve failure resulted in an increase in gas consumption compared to 2015.

2.1.5. However, it should be noted that there is still an overall decreasing trend in gas consumption from 2012 to 2016.

2.1.6. Employee engagement and participation with the gas reduction strategies increased during 2016. A gas consumption target of 44,072 MWh has been set for 2017. It is anticipated that the 2016 strategies outlined above (section 2.1.2.)

will reach their maximum potential during 2017 and will assist to achieve a reduction in gas consumption at the site.

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## 2.2. Electricity Consumption

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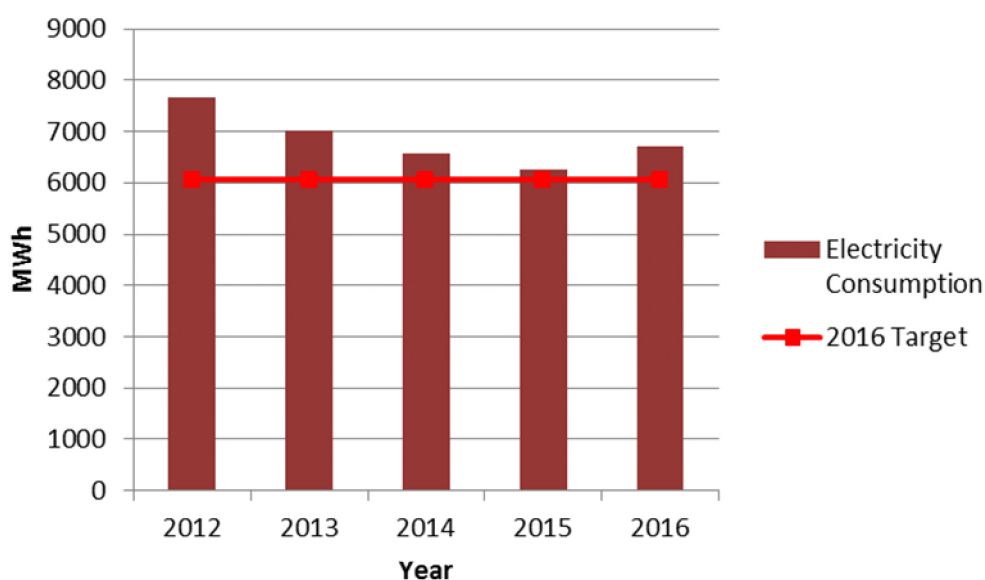
2.2.1. BAE Glascoed set a target to reduce electricity consumption by 3% in 2016 compared to 2015 performance.

2.2.2. The following strategies were implemented during 2016 to reduce electricity consumption at the site:

- fire water pumping system upgrade;
- analysis of metered data; and
- investigations into the feasibility of additional controls for Number 1 Significant Energy User (“SEU”), which is Building 8E11/12 housing cooling bays.

2.2.3. Electricity consumption for the last 5 years is shown below in Figure 2, together with the 2016 target of 6,054 MWh.

**Figure 2: Electricity Consumption for 2012 to 2016**



2.2.4. The data in Figure 2 shows that BAE Glascoed did not meet the 2016 target. This was due to operating hours of Number 1 SEU increasing in 2016 compared to 2015. A new target for 2017 has been set to reduce electricity consumption to 6,513 MWh and achieve continual improvement.

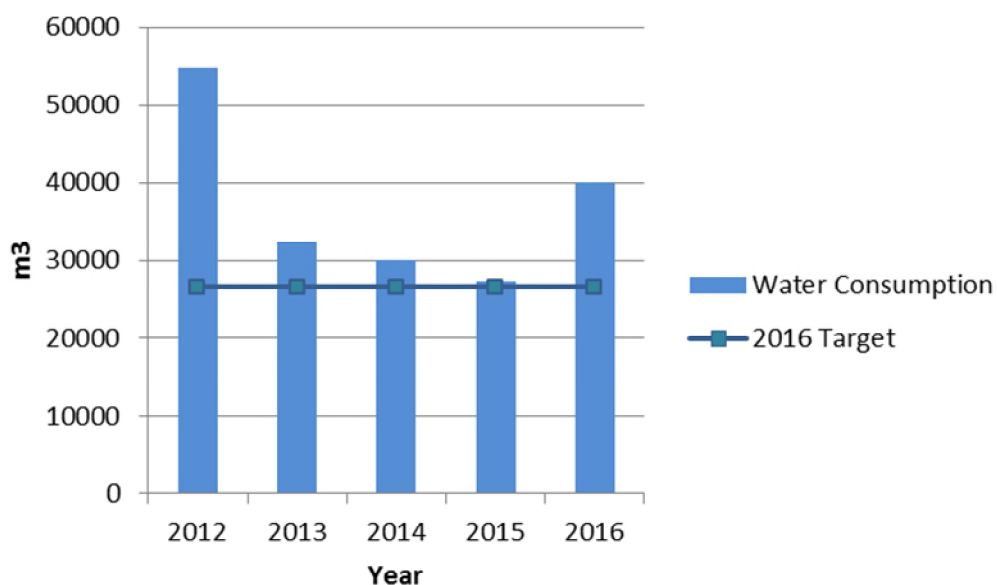
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## 2.3. Water Consumption

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- 2.3.1. BAE Glascoed set a target to reduce water consumption by 3% in 2016 compared to 2015 performance.
- 2.3.2. The following strategies were implemented during 2016 to reduce water consumption at the site:
- improved leak detection and rectifying time; and
  - further analysis of metered data.
- 2.3.3. Water consumption for the last 5 years is shown below in Figure 3, together with the 2016 target of 26,539 m<sup>3</sup>.

**Figure 3: Water Consumption for 2012 to 2016**



- 2.3.4. The data in Figure 3 shows that BAE Glascoed did not meet the 2016 target. A significant water leak was identified and repaired in December 2016 which resulted in a non-process related increase in water consumption at the site.
- 2.3.5. Water pipe inspection and leak detection continues to be of high priority and a further water reduction target of 38,832 m<sup>3</sup> has been set for 2017.

### 3. CONCLUSION

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- 3.1. As part of BAE Glascoed's Integrated Management System ("IMS"), annual improvement targets are set to enhance environmental performance and achieve continual improvement. The targets which were set in 2016 related to gas, electricity and water consumption, aiming to achieve a 3% reduction in comparison to 2015 performance.
- 3.2. A number of strategies were implemented to help achieve the targets, such as system upgrades and additional analysis of metered data. Additionally, an increase in employee engagement was observed during 2016. For a number of reasons, such as increased frost protection being required and a water leak occurring in the latter part of 2016, the targets were not met. However, BAE Glascoed is committed to the continued implementation and enforcement of the strategies discussed above in order to achieve 2017 targets.