**Line Volumes, Usage and Resource Efficiency for BN2832IK**

With Britvic Beckton site now wishing to retain the existing Lines 1 and 2, and commission a new Line 6 a variation to the permit is required. This volumes, energy and utilities summary has been prepared to support this variation using the most recent production forecasts.

***Line 1***

* Maximum run speed = 16,000 bottles per hour
* Maximum bottle size = 2 Litres

Therefore, the maximum daily throughput = 16000 x 2 = 32000 Litres of product per hour x 24 hours = **768,000 Litres of product per day**

***Line 2***

* Maximum run speed = 18,000 bottles per hour
* Maximum bottle size = 2 Litres

Therefore, the maximum daily throughput = 18000 x 2 = 36000 Litres of product per hour x 24 hours = ***864,000 Litres of product per day***

***Line 6***

* Maximum run speed = 54,000 bottles per hour
* Maximum bottle size = 0.5 Litre

Therefore, the maximum daily throughput = 54000 x 0.5 = 27000 Litres of product per hour x 24 hours = ***648,000 Litres of product per day***

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| **Theoretical Maximum Daily Volumes (Litres)** | |
| Retaining of existing Line 1 | 768,000 |
| Retaining of existing Line 2 | 864,000 |
| Line 3 | 576,000 |
| Line 4 | 864,000 |
| Line 5 | 1,032,000 |
| Line 6 | 648,000 |

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| **Theoretical Maximum Weekly Volumes (Litres)** | |
| Retaining Line 1 | 5,376,000 |
| Retaining Line 2 | 6,048,000 |
| Line 3 | 4,032,000 |
| Line 4 | 6,048,000 |
| Line 5 | 7,224,000 |
| Line 6 | 4,536,000 |

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| **Projected Energy and Utilities Usage** | |
| ***Electricity Usage*** |  |
| All Lines 1- 6 | 21,801,054 kwh |
| ***Natural Gas Usage*** | |
| All Lines 1 - 6 | 12, 997,594 kwh |
| ***LPG Usage*** |  |
| All Lines 1 - 6 | 269,456 kwh |
| ***Water Usage*** |  |
| All Lines 1 - 6 | 817,028m3 |
| **Budgeted Production Volumes (carbonates and stills)** |  |
| Total - All Lines 1 – 6 | **1,775,376 litres/day** |

The proposed re-introduction of production Lines 1, 2, 6 and their technically linked ancillary equipment have incorporated some of the following energy and utilities efficiency technologies: -

* Variable speed pumps, motors and invertors to be installed.
* Conveyors will be driven by permanent-magnet motors which surpass IE4 standard for efficiency
* Internal liquid storage tank contents are continuously monitored. Therefore, any unplanned discharge or leakage is detected, activating alarms, so to prevent any wastage of natural resources
* The majority of pumps are controlled by variable speed drives (VSD inverters) to ensure energy usage is optimised. PID control feedback is via flow meters or pressure transducers as appropriate.
* Water purges: preparation ingredient purges are controlled and form part of the recipe, this means that purge water is metered or works on timers and enters the syrup batch rather than running to drain.
* 40 Bar compressors will have their operating pressure reduced to around 38 Bar and incorporate an energy recovery system to feed the low-pressure system
* The Energy Savings Opportunities Scheme (ESOS) survey was completed in 2019 with a number of the potential energy saving opportunities being implemented.