

<b>Subject</b>	<b>MONITORING &amp; REPORTING REQUIREMENTS FOR BES 6001</b>		
<b>Owner:</b>	McEntegart, Patrick	<b>Document No.</b> Ene-Doc-13	<b>Kingscourt</b> ✓
<b>Compiled By:</b>	C McCullagh	<b>Rev.</b> 1	<b>Head Office</b>
<b>Date of Issue:</b>	14/02/2025 00:00:00		<b>Mining</b>

## 1. Purpose

To document a procedure for the accurate measurement and recording and monitoring of energy data relating to indirect emissions at the Kingscourt process site, and to describe the appropriateness of the monitoring plan at Kingscourt.

## 2. Scope

This procedure applies to indirect gas oil usage for mechanical handling, all electricity power usage and direct emissions as outlined in the site Green House Gas Permit at the Kingscourt process site.

## 3. Responsibility

Quality Director

Supply Chain Manager

Manufacturing Manager

Production Managers

Procurement Manager

Energy Management Team

Stores Personnel

## 4. General

Under Directive 2003/87/EC and 2009/29/EC of the European parliament and of the council, Saint-Gobain Construction Products (Ireland) Ltd. are required to quantify its greenhouse gas emissions in order to participate in greenhouse gas emission allowance trading within the community. These requirements are complied with through the details outlined in it's the Green House Gas Permit as issued by the EPA. In addition to the requirements of GHG Permit Saint-Gobain Construction Products (Ireland) Ltd shall report to its stakeholders on the indirect emissions and removals of greenhouse gases according to BES 6001 standard (and the principles of ISO 14064-1).

Carbon Dioxide (CO<sub>2</sub>) production is as a result of both 'Indirect' emissions, gas oil/LPG usage for mechanical handling and all electricity power usage at the site and ('Direct' Emissions) Combustion of natural gas, diesel (gas Oil), LPG and propane on the site.

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A summary table of both Indirect and Direct Emissions is given below:

<i><b>Indirect Emissions Sources</b></i>	<i><b>Included in tCO<sub>2</sub> (e) Data [BES 6001]</b></i>
Mobile plant oil/LPG usage	Yes
Site Electricity Usage	Yes
<i><b>Direct Emissions Source:</b></i>	<i><b>Included in tCO<sub>2</sub> (e) Data [BES 6001]</b></i>
Gas burners on the Board Plant Dryer	Yes
Gas burners on all Raymond Mills and Kettles.	Yes
Gas burners on Perlite and Vermiculite Expanders	Yes
Gas boilers for heating	Yes
Radiant Gas Heaters	Yes
Oil Boilers for Office Heating	Yes

Note: Data from Direct Emissions sources are included in the site EUETS tCO<sub>2</sub> (e) submission Annual Emissions Report to national authority (EPA).

It is a requirement that the reportable tCO<sub>2</sub>(e) Direct emissions associated with the equipment included in the EUETS tCO<sub>2</sub>(e) data is monitored, recorded, checked and verified, through the requirements of its Green House Gas Permit.

It is the responsibility of the Energy Management Team to review and prepare the monitoring and reporting plan for verification and approval by an external approved verification body.

It is the responsibility of the Energy Management Team to review and update the Emission data relating to both its Direct and its indirect emissions for submission to the Approved verification body. This verification process will be concluded during the Annual verification process as required by its Green House Gas Permit in preparation of its Annual Verification Report (AER).

It is the responsibility of the Energy Management Team to audit both the AER and emissions data relating to its indirect operations including supporting documentation on an annual basis. A copy of the Audit Report will be recorded and available for inspection during the external verification Audit.

[Note: A separate document Ene-Doc-8 details the monitoring and reporting requirements and removals of GHG related to energy use in its direct operations.]

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## 5. Procedure (Indirect Emission Sources)

### 5.1. Gas Oil & LPG

- 5.1.1. Gas oil and LPG are used in mobile plant operating at the Kingscourt site for handling and moving product within the confines of the site.
- 5.1.2. Emissions related to gas oil and LPG usage are determined by means of routine examination of the invoices from the supplying company and reference to the national standards published for Net Calorific Value and Emission Factor.
- 5.1.3. Records of monthly gas oil and LPG invoices of deliveries for the Transport oil and LPG tanks are used to quantify overall gas oil usage for all mobile plant at the Kingscourt site.
- 5.1.4. On the final day of each month the Stores Personnel, obtains details of the individual mobile plant oil and LPG usage from the fuel dispensing unit. The individual usage is recorded through a keypad operated secure I.D. system assigned to each item of mobile plant. The captured data is obtained via memory key that downloads the data from the dispensing unit. This data details the specific usage associated with each individual item of mobile plant. At the time of download the Stores Personnel also note the closing stock on the localised meter mounted on the Main gas Oil dispensing tank. This tank holds and dispenses all gas Oil used at the site for mobile transport.
- 5.1.5. The memory key contains the recorded data and it permits the Stores Personnel to complete records for all transactions for Opening & Closing Stock, Issues and receipts on an excel spreadsheet titled 'Transport Fuel Oil Stocks\*\*\*\*' (\*\*\*\* indicates current month).
- 5.1.6. This spreadsheet is forwarded to the Energy Management Team on a monthly basis, to assist in completion of the Monthly Transport Oils Usage at the Kingscourt site.
- 5.1.7. The Energy Management Team uses the indicated 'metered' CLOSING stock level measurement' recorded at current year end, by the Stores Clerk, to provide a final 'closing stock' measure, this will be used to record an 'opening stock' measure on the Excel spreadsheet

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maintained on Environmental 'V' drive titled 'BES 6001 Gypsum CO2 ...' For the incoming year.

5.1.8. The volume of gas oil and LPG delivered in Litres, as recorded on delivery docket received by Stores Personnel, is compared against the relevant invoice issued for the specific Delivery Docket as referenced by its unique I.D. number.

5.1.9. For Audit purposes a SAP screenshot detailing ordered quantities, for the year in question, of mobile oil to the Transport tank at Kingscourt, is used to verify and match Invoices against recorded against Delivered Quantities to the site. This data is maintained on Excel spreadsheet on the Environmental 'V' drive titled BES 6001 Gypsum CO2 ...' for the incoming year. These records are inspected as part of the Audit trail

5.1.10. Annually Data sheets obtained from the supplier are used in conjunction with Country Specific Emission factors to calculate an actual value the equivalent Tonnes of CO<sub>2</sub> (e) produced from this fuel source.

5.1.11. These figures are recorded by the Energy Management Team on the above spreadsheet.

## 5.2. Electricity

5.2.1. Emissions related to electricity are determined by means of monthly reconciliation of the invoices from the supplying company to the metering system onsite.

5.2.2. Supplied electricity invoices detailing electricity usage for the site are used to record actual usage on an Excel spreadsheet maintained on Environmental 'V' drive for the incoming year,

5.2.3. Data obtained from the supplier are used in conjunction and reference to the national correction factors as published by Sustainable Energy Authority of Ireland (SEAI) are used to calculate an actual value the equivalent Tonnes of CO<sub>2</sub> (e) produced from this energy source.

5.2.4. These figures are recorded by the Energy Management Team.

## 5.3. Monitoring and Reporting Plan

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The monitoring plan collates this data by way of standard commercial spreadsheet software to analyse trends and calculate emissions. This software is maintained on the company's IT infrastructure managed by the IT department.

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#### 5.4. Verification Procedure

- 5.4.1. The Energy Management Team will endeavour to arrange a pre verification audit in the first quarter of the year.
  
- 5.4.2. The verifier used in this process will be appointed in order to comply with both the requirements of the site's Green House Gas permit and reporting requirements of its indirect emissions.
  
- 5.4.3. The Energy Management Team shall ensure that the verifier is accredited by the EPA to perform the verification process.
  
- 5.4.4. The verifier will provide the site contact (Energy Management Team) with an audit plan.
  
- 5.4.5. It is the responsibility of the Energy Management Team to ensure that this information is prepared in advance and available for the pre verification audit.
  
- 5.4.6. On completion of the Draft Verification Report, the Energy Management Team must submit this draft to the verifiers and arrange a verification audit.
  
- 5.4.7. On receipt of the Verified Report, the Energy Management Team must submit the report to the Procurement Manager and Manufacturing Manager.
  
- 5.4.8. The Energy Management Team shall ensure that Key Performance Indicators (Energy Intensity data t CO<sub>2</sub> (e) are reported to head office for upload onto to company website.

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### 5.5. Retention of Information

It is the responsibility of the Supply Chain Manager to ensure that all invoices for Transport Oil and Electricity Usage are provided to the Energy Management Team.

The Energy Management Team or designate will document and store all monitoring data for all emission sources, for calculation based methodologies this includes:

- 5.5.1. The list of all source streams monitored.
- 5.5.2. The activity data used to complete the calculations, categorised by fuel type.
- 5.5.3. Emission factors, oxidation factors, conversion factors and net calorific values where required.
- 5.5.4. The activity data, emission, oxidation and conversion factors submitted to the competent authority for the national allocation plan for the years preceding the time covered by the trading scheme.
- 5.5.5. Documentation of the responsibilities in connection to emissions monitoring
- 5.5.6. The verified annual indirect emissions Verification report as supplied.
- 5.5.7. Any other information that is identified as required for the verification of the above report.

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### 5.6. GHG Emissions Schematic

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