

Environmental Management Programme 2023/24

Breedon Cement Environmental Department

Kinnegad Cement Plant, County Meath

HE

KEY PILLARS OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME (EMP)

1. Being Good Neighbours

Minimization of fugitive dust emissions

To minimize noise pollution from site

To positively engage with local stakeholders

Minimization of transport impacts

2. Strategic Waste Management

To prevent and reduce waste going to landfill

To optimize thermal energy substitution from alternative fuels

3. Process Optimization and Control

To identify and implement opportunities for energy efficiency

To monitor Water Usage and Protect Water Quality

Reduction in Total Organic Carbon Emissions



OBJECTIVE 1 – MINIMIZATION OF FUGITIVE DUST EMISSIONS





OBJECTIVE 1 – AMBIENT DUST RESULTS



- Two sites for ambient dust monitoring presented below
- Results representative of our overall trends for successful ambient dust suppression measures site wide over the last decade
- Monitoring and feedback to relevant operational personnel on dust trends ongoing and action taken as required
- IE licence require 8 sites to be monitored, Breedon go beyond this, by monthly analysis of 14 sites in total
- Monitored sites are all fully compliant
- All dust related neighbour concerns are fully investigated and closed out at the earliest opportunity





OBJECTIVE 2 – TO MINIMIZE NOISE POLLUTION FROM SITE





OBJECTIVE 2 – ANNUAL NOISE MONITORING 2023



- Sample of our 2023 daytime monitoring results is presented ongoing high level of compliance with all daytime, evening and nighttime monitoring
- Numerous nuisance noise suppression measures have been actioned site wide
- Any new plant commissioned onsite is assessed for noise emissions and suppression measures actioned where necessary
- All noise related concerns from local neighbours are fully investigated and closed out at the earliest opportunity
- All Breedon site personnel are trained on the importance of noise suppression and ensure noise nuisances to local stakeholders are avoided

	Day	time	lim	its	55 d	B(A)
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Table 1	Daytime Noise monitoring survey results							
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25.09.23	11:00	1	Day	51.5	48.5	54.9	73.6	No
				50.0, 51.5,52.9				
25.09.23	15:30	2	Day	51.1	47.5	53.6	76.8	No
				51.9, 48.7,				
25.09.23	10.00	3	Dav	53.5	50.8	57.2	68.3	No
20100120	10.00	5	buy	52.6, 53.2,	50.0	07.12	00.5	
				54.6				
26.09.23	10:30	4	Day	53.2	48.3	56.7	86.6	No
				51.4,53.1,55.0				
25.06.23	11:30	5	Day	51.8	43.0	56.7	81.3	No
				53.1,48.4,53.9				
26.09.23	12:00	6	Day	51.1	43.0	53.4	78.9	No
				53.7,50.1.49.6				
26.09.23	13:29	7	Day	51.9	46.8	55.8	68.7	No
				53.5, 48.4, 53.9				
26.09.23	14:55	8	Day	49.4	38.7	50.0	82.6	No
				48.1, 50, 50.1				
26.09.23	11:00	9	Day	49.5	36.5	55.5	75.1	No
				51.4, 48.8,				

OBJECTIVE 3 – TO PREVENT AND REDUCE WASTE GOING TO LANDFILL



Torgoto	1. Engage the work force at Breedon on proper waste management practices
Targets	2. Reduce waste consigned to landfill relative to activities onsite
Rationale –	To reduce the quantity of waste being disposed to landfill facilities
Methodology	Use toolbox talks, site audits, site signage, site induction training for creating employee awareness on proper waste management. In 2023 Lean Six Sigma Consultant appointed to assist with driving improvements in waste management. This was continued in 2023 and into 2024
Evidence	Site signage and records available for inspection onsite. Waste data recorded and trends reviewed

OBJECTIVE 3 – MINIMIZE WASTE TO LANDFILL



- 1. Avoiding landfilling waste from site is a key aspect of Breedon Cement operations
- 2. All waste onsite is segregated appropriately to maximize recovery options
- 3. The company is continually looking for new and innovative means to recover value from waste streams
- 4. Breedon have engaged a Lean Six Sigma consultant and REPAK on driving waste management improvements for the site
- Breedon Cement continue to improve our waste management activities through our 'Green Lean' sustainability initiatives team

OBJECTIVE 4 – TO OPTIMIZE THERMAL ENERGY SUBSTITUTION FROM

ALTERNATIVE FUELS





OBJECTIVE 4 – ALTERNATIVE FUEL SUBSTITUTION





OBJECTIVE 4 – TYPES OF ALTERNATIVE FUEL USED





Meat and Bonemeal (MBM) first utilized 2006



Liquid Recovered Fuel (LRF) first utilized 2012



Solid Recovered Fuel (SRF) first utilized 2011

OBJECTIVE 5 - TO IDENTIFY AND IMPLEMENT OPPORTUNITIES FOR

ENERGY EFFICIENCY



Targets	1. Retain certification to the ISO 50001 standard
Idigets	2. To reduce the electrical consumption in kilowatt hours per tonne of production by 1% on 2022 baseline levels
Rationale	 To reduce energy use and costs for the plant
Methodology	Engage with external certification body for the 50001 standard, individually plant areas monitored for energy use and specific targets sought
Evidence	ISO 50001 Cartification audit reports available and electrical use trends available ensite for inspection
Evidence	150 5000 r Certification audit reports available and electrical use trends available onsite for inspection

OBJECTIVE 5 – REDUCTION OF ELECTRICAL USE



- 1. Electrical energy efficiency is a key priority of Breedon Cement
- Each section of the Kinnegad facility is metered, managed and specific targeted improvements sought for energy use using energy management software using a traffic light system as shown below
- 3. The company uses the ISO:50001 energy management system as the external certification system of our processes, procedures and targets
- Upstream of our operations, all new electrical equipment purchased for site requires high energy efficiency as standard
- 5. All electrical energy used onsite are sourced from renewable power sources

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OBJECTIVE 6 - MONITOR WATER USAGE AND PROTECT WATER QUALITY





OBJECTIVE 6 – WATER QUALITY MONITORING







- Breedon Cement have comprehensive water quality monitoring process in place above and beyond licence requirements
- There are ongoing very high standards of water quality compliance with licence limits, as per these parameters shown
- All water quality monitoring is reported publicly through our AER and online monitoring equipment calibrated and verified
- Stakeholder engagement on water supply issues is a key focus of the Environmental Management Programme and monthly monitoring is completed instead of licence required biannual monitoring

OBJECTIVE 6 – WATER LEVEL MONITORING



- Groundwater levels for 26 separate monitoring points are recorded on a monthly basis licence requires only 22 sites to be monitored biannually
- This dataset allows the company to be proactive in liaising with local stakeholder concerns regarding water supply
- As an example, one site monitored monthly since 2002 is given below*



OBJECTIVE 7 - TO POSITIVELY ENGAGE WITH LOCAL STAKEHOLDERS





OBJECTIVE 7 – COMMUNITY ENGAGEMENT

- Breedon engages with our local stakeholders through several platforms
- Examples of these relations are illustrated through our biannual newsletter and number of group visits to the site
- The company employs a large number of its workforce from the local area and also contributes to numerous clubs, schools and societies in the locality
- Stakeholder engagement is always a key focus of the Environmental Department to ensure locals are not overlooked by day-to-day operations at the plant



Santa visits Breedon Cement Kinnegad - a delight for young and old alike

Breedon Cement Kinnegad were delighted to welcome our local neighbours, colleagues, and friends to the site for our magical Santa Experience on Saturday 2nd of December.

The festive spirit reached new heights at Breadon Cement as Sand Claus made a special visit to spread joy among children and the young at heart. The magical event took place on our wonderful 'velness walkway' setting, creating a memorable experience for all who attended.

Children (Illed with anticipation, gathered around as Sand a kitholide giths: The joy on their faces created a heartwarming atmosphere for everyone. We're very grateful this Santa decided to take the time out of this busy control with the santa of the santa and the santa santa santa contractors who all our Breachor colleggies and contractors who all our Breachor colleggies and contractors who put a lot of hard work and effort thin making the event a huge success and an experience to remember.

We were also delighted to confirm that at the end or the Santa visite ever, be had collected a total of $\xi_1 S_2$ in contributions from the numerous guests who attended the event. Breedon Cennett will match that amount, and so we will be donating a total of $\xi_2 S_0 t$ to www.childrensbooksireland.le, an organisation that does finatist event to inspire and enable children and young people to become readers for life.





BREEDON News

BREEDON



Breedon Cement sponsors life saving equipment for local community

Breedon Cement were pleased to sponsor the purchase of an AED defibrillator for the local community in Ballinabrackey recently.

www.breedonard











BREEDON GROUP

OBJECTIVE 8 MINIMIZATION OF TRANSPORT IMPACTS





OBJECTIVE 8 – TRANSPORT IMPACTS



- Sourcing the maximum quantity of raw materials onsite to minimize impacts of HGV transport impacts is a key aspect of our EMP
- These graphs indicate how the company has sought to achieve this target, through ongoing thorough quality control processes and transport metrics
- Engagement of hauliers and haulage companies is reviewed at least monthly through our Safety Management meetings and there is an ongoing 'Step in' culture for Safety and Environmental concerns practiced by all Breedon colleagues onsite with contracted hauliers



Raw Materials Sourced offsite – transport metrics



OBJECTIVE 9 REDUCTION IN TOTAL ORGANIC CARBON EMISSIONS



Targets	1. To continuously monitor TOC emissions for IEL 487-07 emission point A2-01
Targets	2. To employ a programme of TOC emission reductions, if possible, through process optimization and raw material selection.
Rationale	To ensure TOC emissions comply with the IE licence limit and identify, if possible, further reductions in concentration
Methodology	ABB continuous emissions monitor at IEL p0487-07 point A2-01 and to reduce TOC through process optimization and raw material selection
Evidence	Continuous emissions monitoring data results available onsite and in Annual Environmental Report. Raw material usage available in Quality Departments 'blend pile' tracker log

OBJECTIVE 9 – TOC REDUCTION



- TOC reduction is primarily controlled through our Quality Control, Quarry and Production departments
- Raw material inputs and process conditions are monitored continuously with plant production
- The output of our TOC is measured at our main emission stack, EPA reference p0487-07, with results for 2023 given below

