



Breedon Cement Ireland Limited

Environmental Management Programme 2019

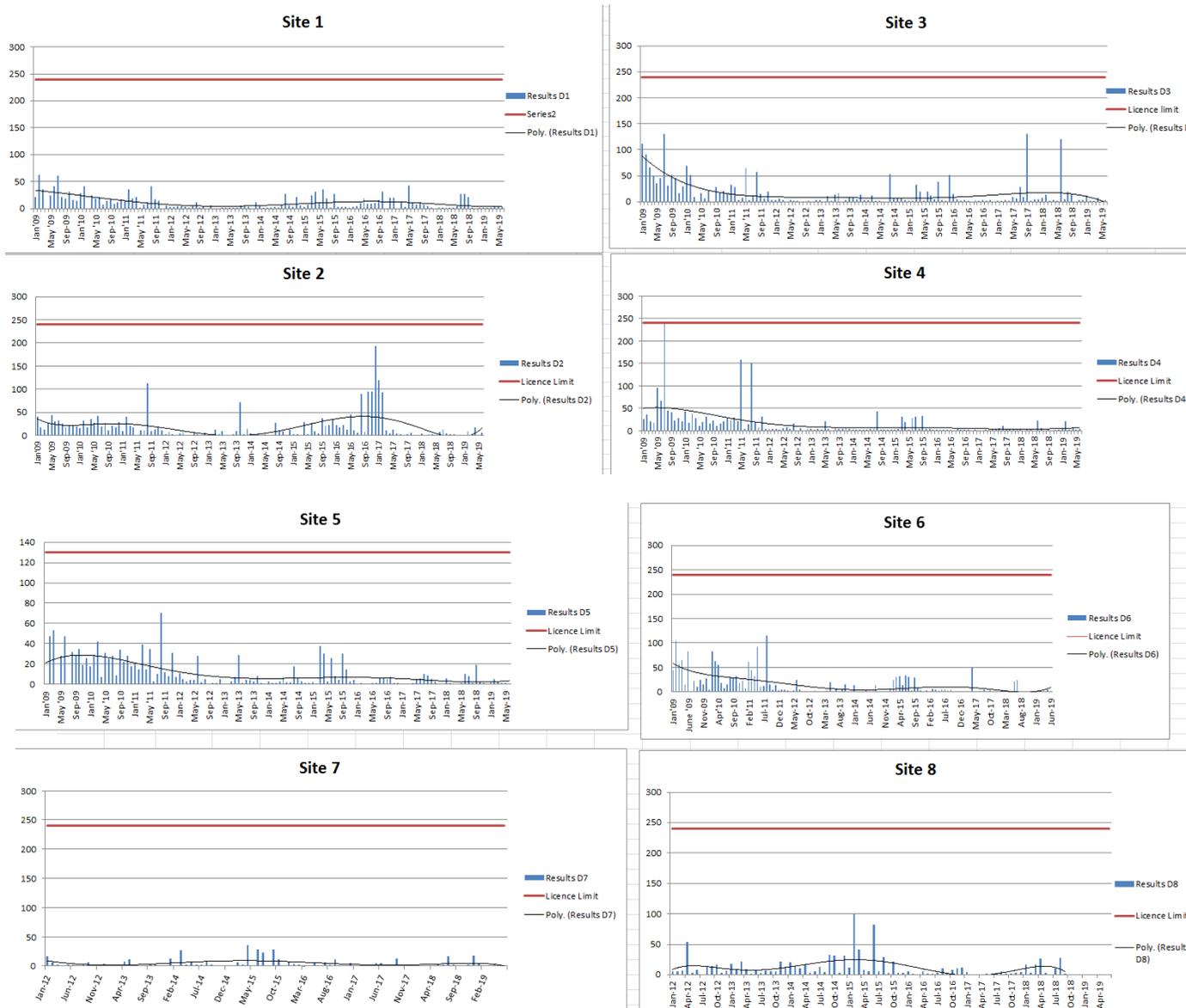
**Summary Overview of
Objectives and Targets H1 2019**

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1. Ambient dust monitoring results 2009 to end of H1 2019

Ambient dust monitoring from onsite gauges with trend lines indicates ongoing improvements in dust minimisation from containment measures applied onsite. Breedon Cement are committed to ensuring ongoing ambient dust mitigation is continued and is a core part of our Environmental Management Programme.



2. Noise monitoring results 2019

Annual noise monitoring results below indicate full compliance with the IE Licence P0487-07 emission limit values for daytime, evening time and night time noise. Ongoing compliance with noise emission limit values is a top priority for all personnel operating onsite.

Table 1 Daytime Noise monitoring survey results

Monitoring Location	Date/Time	L _{Aeq, 30min} dB(A)
NSR-1 Landsdown Lodge Gate House	24.06.19 15:26 – 16:56	46.6
	Mean	
NRS-2 -East of Cement Plant	25.06.19 09:35 – 12:36	46.7
	Mean	
NSR-3 - East of Cement Plant	24.06.19 13:35 – 15:09	45.8
	Mean	
NSR-4 - West of Shale Quarry	24.06.19 16:01 – 17:10	48.4
	Mean	
NSR-5 - West of Cement Plant	24.06.19 16:19 – 17:54	45.4
	Mean	
NSR-6 - Northwest of Cement Plant	24.06.19 13:18 – 15:03	45.4
	Mean	
NSR-7 - Northeast of Cement Plant	25.06.19 11:51 – 13:14	53.2
	Mean	
NSR-8 - Southeast of Cement Plant	25.06.19 09:55 – 12:45	47.9
	Mean	
NSR-9 - Southwest of Cement Plant	24.06.19 13:08 – 15:00	41.7
	Mean	

Table 2 Evening Noise monitoring survey results

Monitoring Location	Date/Time	L _{Aeq, 30min} dB(A)
NSR-1 Landsdown Lodge Gate House	24.06.19 20:05 – 20:35	45.2
NRS-2 -East of Cement Plant	25.06.19 19:10 – 19:40	46.9
NSR-3 - East of Cement Plant	24.06.19 20:18 – 20:48	38.5
NSR-4 - West of Shale Quarry	24.06.19 21:02 – 21:32	47.7
NSR-5 - West of Cement Plant	24.06.19 19:34 – 20:01	45.3
NSR-6 - Northwest of Cement Plant	24.06.19 19:19 – 19:49	41.6
NSR-7 - Northeast of Cement Plant	25.06.19 19:22 – 19:52	51.9
NSR-8 - Southeast of Cement Plant	25.06.19 19:15 – 19:45	45.9
NSR-9 - Southwest of Cement Plant	24.06.19 19:21 – 19:51	40.7

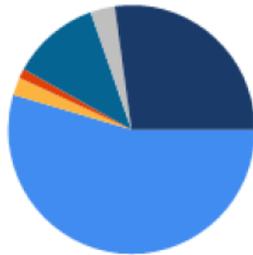
Table 3 Night time Noise monitoring survey results

Monitoring Location	Date/Time	L _{Aeq, 30min} dB(A)
NSR-1 Landsdown Lodge Gate House	25.06.19 23:26 – 00:34	39.9
	Mean	
NRS-2 -East of Cement Plant	25.06.19 00:01 – 01:18	41.3
	Mean	
NSR-3 - East of Cement Plant	26.06.19 00:05 – 01:16	42.1
	Mean	
NSR-4 - West of Shale Quarry	27.06.19 00:08 – 01:14	46.4
	Mean	
NSR-5 - West of Cement Plant	27.06.19 00:53 – 01:57	45.0
	Mean	
NSR-6 - Northwest of Cement Plant	26.06.19 00:17 – 01:27	42.2
	Mean	
NSR-7 - Northeast of Cement Plant	27.06.19 02:25 – 03:55	43.5
	Mean	
NSR-8 - Southeast of Cement Plant	26.06.19 00:16 – 01:21	39.9
	Mean	
NSR-9 - Southwest of Cement Plant	26.06.19 02:01 – 03:04	40.9
	Mean	

3. Waste Recycling Summary for H1 2019

Waste produced at Breedon Cement in Kinnegad is source segregated onsite to assist our waste management partners, Thornton’s Recycling, in ensuring the maximum quantity as possible is diverted from landfill. The details below outline the waste summary figures for the first half of 2019 (Jan-June). The high recycling rate and low proportion of our waste landfilled is priority for Thornton’s and Breedon. Breedon will continue to maximise segregation of waste onsite and introduce improvements in waste management practices where possible.

Total Waste Summary

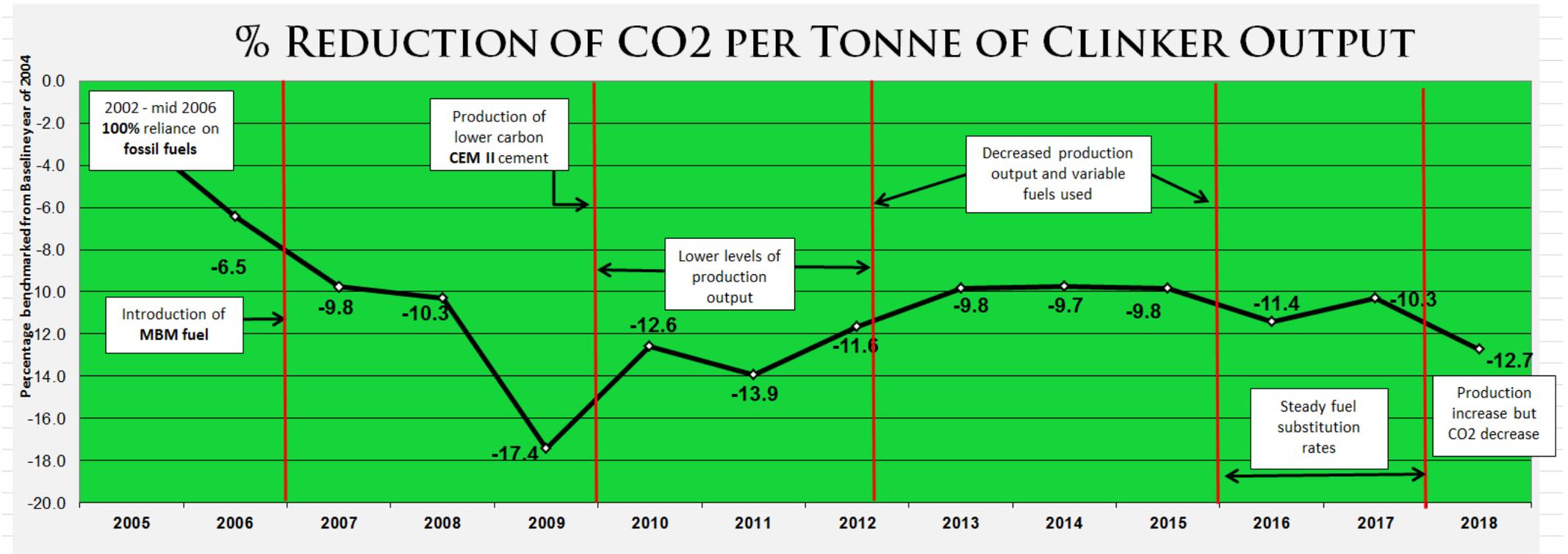


■	Bulky MMW - 65.85
■	Combustible Waste Suit SRF/IN - 2.78
■	Mixed Dry Recyclables - 1.49
■	Mixed Municipal Waste - 13.93
■	Processed Cardboard i.e. Baled - 3.88
■	Wood Packaging i.e. pallets - 32.82

Total Weight Tipped	120.76	Tonnes
Total m³ Tipped	120.76	m ³
Ave Weight / Transaction	0.55	Tonnes
Avg Recycled / Recyclable	21.98	m ³
Avg Recycled / Component	18.31	m ³
Avg Recycled / Transaction	0.50	m ³
Total Avg Landfilled	8.09	m ³
Recycling Rate	90.99	% (m ³)

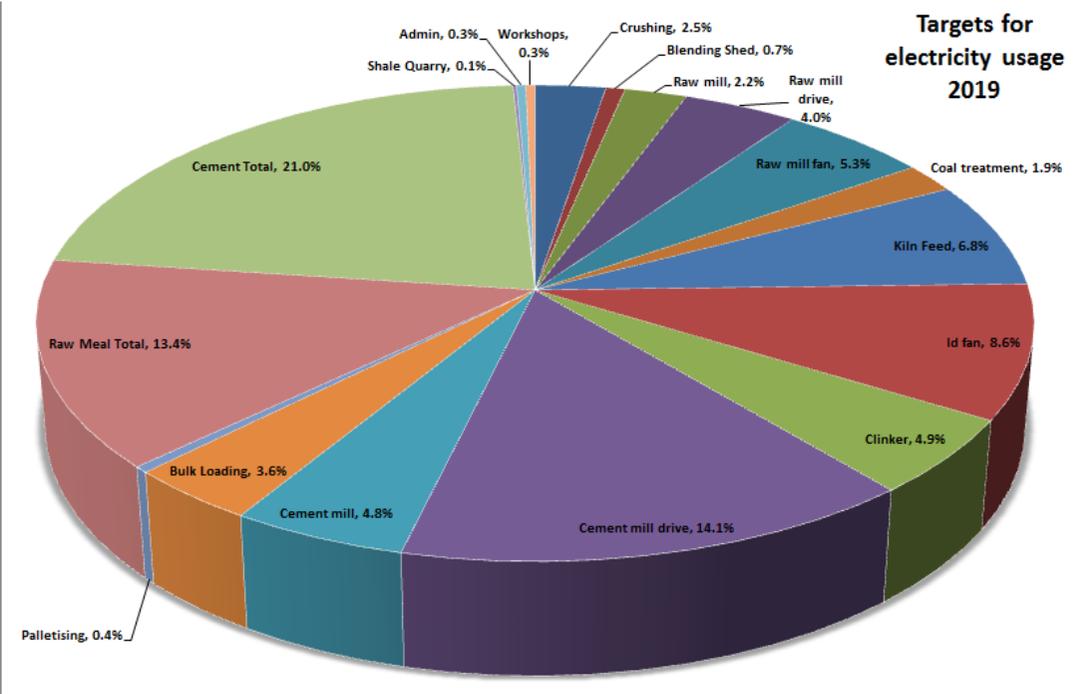
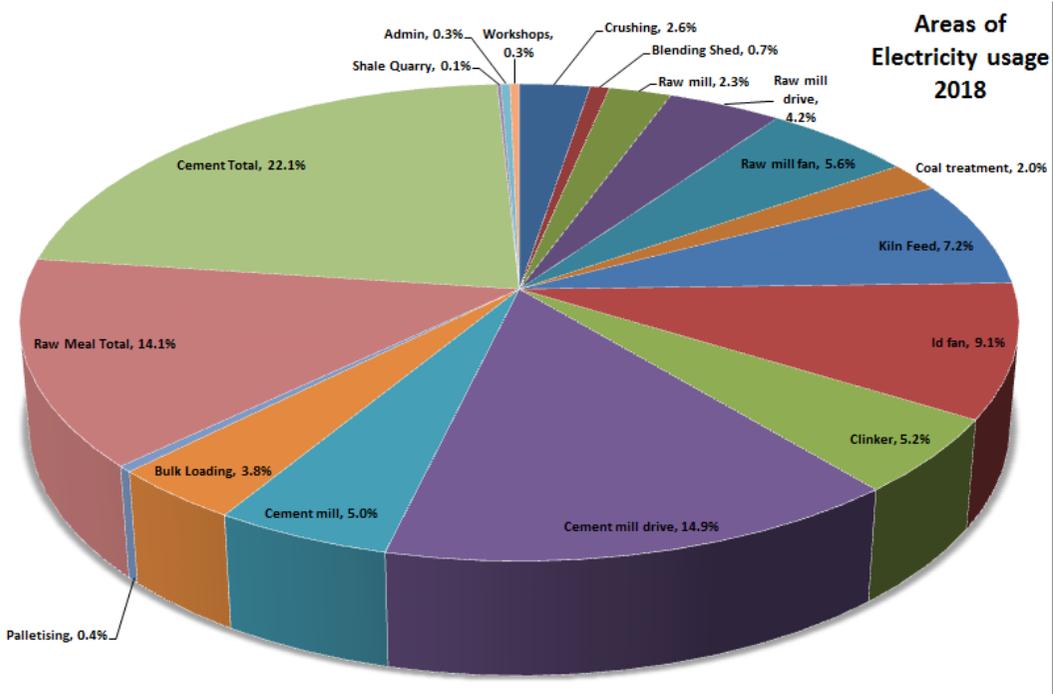
4. Optimising carbon emissions reductions use through the use of alternative fuels

Ongoing reductions of carbon emissions from our production operations are a high priority at Breedon Cement. The primary metric for carbon emission reductions is the expression of carbon per units of clinker output. The detail for 2018 presented on the graph demonstrates the ongoing successes in how Breedon have successfully decoupled production output from carbon emissions through the use of alternative fuel in the process.



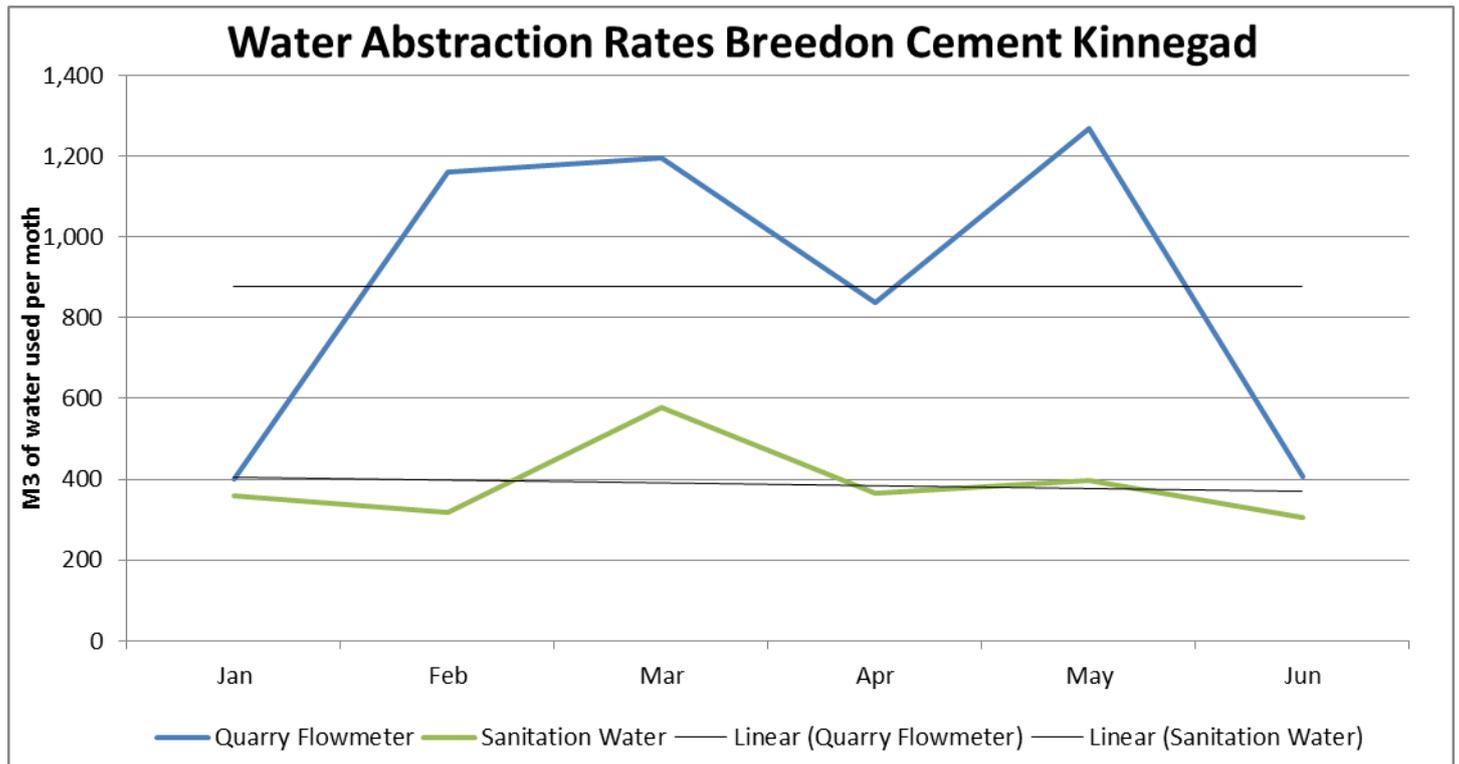
5. Targeted reductions in electricity consumption across the plant

The electrical department, under the ISO 50001 Energy Management System, has identified the specific electrical consumption of each of the plant areas. Through specifically targeted electricity improvement initiatives, electrical consumption savings of 1% will be sought before year end 2019.



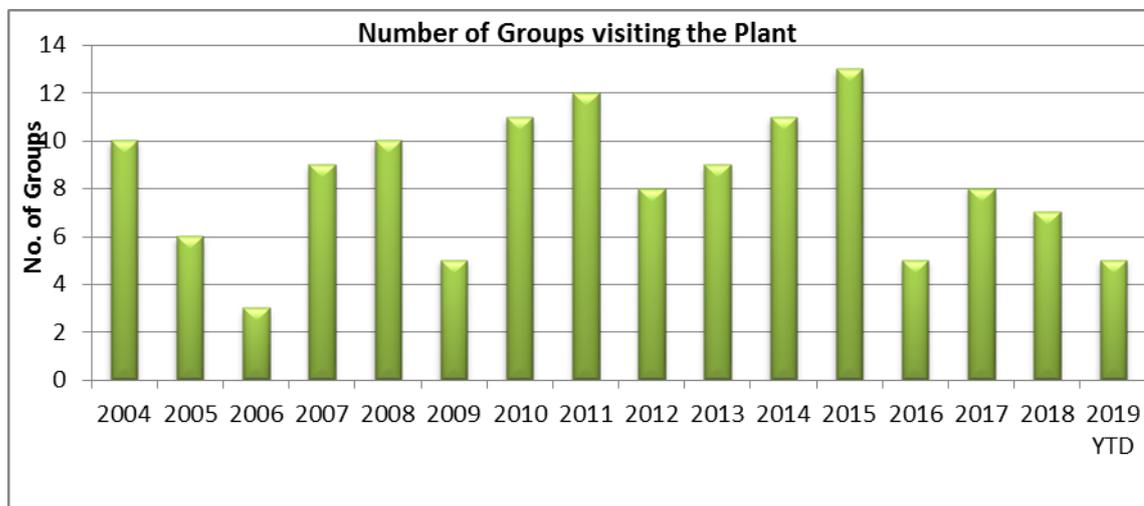
6. Ensuring good quality and efficient use of water

The water abstracted, consumed and discharged at the Breedon Cement facility is closely monitored on a daily basis. The water extraction rate from the quarry for the first half of 2019 is graphed below. Investigative and corrective action is taken if benchmark water use levels are reached or exceeded, which are greater than 1500m³/ month of quarry water and greater than 1000m³ sanitation water. Quality of water emissions is also another key parameter that is closely monitored and controlled as part of the Environmental Management programme. Water quality reporting is a key part of the Annual Environmental Report.



7. Community Engagement

The number of school groups visiting the plant and local community newsletters are key metrics Breedon Cement use for community engagement. Graph below gives an overview of how we continue to engage with groups.



8. Minimising transport impacts through locally sourced raw materials

The main control Breedon Cement can maintain on our transport impacts is through the maximisation of locally sourced raw materials for cement manufacturing. Detailed below is a summary of the continuation of a trend of locally sourced inputs to the cement manufacturing process. Breedon Cement also continues to engage with all our hauliers on their Health and Safety responsibilities while working onsite.

