Sustainability Performance Report

10th Report: 2022 Data

Our Commitment

We have always been committed to providing a high quality, sustainable product, produced to the highest possible standards.

We ensure that manufacturing potential is maximised through the reuse of otherwise waste materials, reducing the overall impact on landfill and subsequently minimising the effect upon the environment.

The business first achieved certification to ISO 9001 (quality management) back in 1990. In this year we also achieved our kitemarking licence and committed to making our blocks to a strict quality standard (EN 771-3). By 2012 we had added ISO 14001 (environmental management) to our list of certifications. Then, in 2020, ISO 45001 certification (occupational health and safety management) was achieved.

In 2022, we met the standard for ISO 50001 (energy management), which holds us to high levels of energy management. This new standard works alongside our other frameworks in a comprehensive integrated management system.

A Greener Future For Plant Vehicles

Transport is the largest contributor of carbon emissions in the UK, accounting for approximately 24% of all emissions produced annually. It is no secret that the construction industry in the UK relies heavily on its transport, particularly the use of large, industrial plant vehicles, with around 90% of these being fuelled by diesel.

At Lignacite, we are committed to moving towards a greener future, away from high-carbon fuels such as diesel. This is why we have made the decision to switch to HVO to fuel all our plant vehicles.

HVO is a form of biodiesel, with around 90% less emissions than conventional diesel. We are committed to changing all of our plant vehicles over to this greener fuel by the end of Q1 2023. This means that we will be able to reduce our annual carbon emissions by approximately 450 tonnes.

We have also pledged to only purchase HVO fuel that is 100% certified and proven to be from renewable/sustainable sources.

The Digital Age

Our sustainability focus isn't solely concentrated on just our blocks. Instead, we are looking at the business as a whole. We are therefore working towards becoming a totally paperless environment. Part of this change has already taken place, with paper invoices no longer being sent out to customers. Instead, all of our drivers now have digital delivery notes and job tickets. Information which needs to be retained is also now kept digitally, rather than being printed off and placed into folders that sit on shelves and gather dust. Staff are encouraged to think before they print too. We believe that if we all make small changes, together we can make a big difference.

Improving And Monitoring Sustainability Performance

At Lignacite, we have always had a strong focus on making our products as sustainable as possible. In previous years, we have worked closely with organisations such as the British Precast Concrete Federation and the Concrete Block Association to develop, monitor and improve our sustainability performance.

As a signatory to the British Precast Concrete Federation 'Sustainability Charter', we also aimed to go beyond environmental legislation. As part of this partnership, we contributed data that helped to develop a generic Environmental Performance Declaration (EPD) for concrete blocks. The creation of this EPD was a major achievement at the time.

Now we are ready to create a milestone of our own. We have begun to develop our own independently verified EPDs, based solely on our own data. The production of these documents will encourage us to continuously improve our sustainability performance and provide accurate data for our customers to help them enhance their own operations.

Net Zero

We have pledged to become carbon neutral by 2030, 20 years ahead of the UK government's plan to achieve net zero by 2050. This is an ambitious target but one that we firmly believe is achievable. In order to become carbon neutral, the business will need to make significant changes to its block manufacturing processes. Part of this has already begun, with HVO now fuelling 75% of our plant vehicles. The remaining 25% are expected to be switched to this greener fuel by the end of Q1 2023. The new block plant, currently being constructed at our Brandon site, has also been designed with energy efficiency in mind.

Throughout 2022, we focused on making improvements to the monitoring of our energy consumption, installing AMR meters and tracking devices throughout our facilities to ensure we have 100% accurate data. This is vital to helping us build our roadmap to a greener future.

We are also working on reducing the use of cement in our blocks, with the end-goal being the development of a cement-free block. We are committed to increasing our use of secondary/recycled aggregates and reducing our use of primary aggregates too, as well as sourcing materials from local suppliers where we can.

In addition, we are prioritising the use of renewable energy sources over fossil fuels. As well as switching to HVO, we are also looking to expand solar power at our Brandon site and install new solar panels at our Nazeing yard. We are actively monitoring HGV technology to enable us to switch our haulage fleet to renewable fuel sources too.

It is no secret that there is much to do. The road to net zero is long but one that we firmly believe is worth travelling.

Verification Of Data

A key improvement initiative is to obtain external verification of data used to set objectives and targets. Independent data verification has been achieved through *NR Richards Associates Limited*, a respected construction-focused organisation in the field of environmental and sustainability performance.

The data presented in the table below shows our performance during 2022, with previous years' performance presented alongside where available.

Significant improvements were made last year regarding the recording of KPIs to allow for more accurate monitoring of energy usage and carbon emissions.

ASPECT	UNIT OF MEASURE	INDEPENDENTLY VERIFIED DATA		
		2020	2021	2022
Electricity Use	Total kWh	2,167,143	2,531,586	2,201,473
	% Renewable	7%	6%	7%
	kWh / M^2	1.04	0.87	0.77
Natural Gas Usage	Total kWh	14,691	38,323	69,899
	kWh / M^2	0.08	0.07	0.05
Diesel For Plant Vehicles and Heating	Total kWh	2,195,192	2,675,527	1,945,229
	kWh / M^2	1.05	0.90	0.68
Diesel for HGVs	Total kWh	2,089,368	2,555,605	3,164,548
	kWh / M^2	1.01	0.86	1.103
Total Diesel Usage	Total kWh	4,284,560	5,231,132	5,109,777
	kWh / M^2	2.06	1.77	1.78
LPG Usage	Total kWh	484,503	363,196	0
	kWh / M^2	0.23	0.12	0
Total Energy Usage	Total kWh	6,950,897	8,164,237	7,381,149
	kWh / M^2	3.35	2.76	2.57
Carbon Footprint	Total Kg	1,663,776	1,839,724	1,707,110
	Kg / M^2	0.80	0.62	0.60
Mains Water Usage	Total Litres	3,527,000	7,116,000	6,673,400
	Litres / M^2	1.70	2.41	2.33
Borehole Water Usage	Total Litres	11,196,000	14,357,000	15,381,100
	Litres / M^2	5.39	4.86	5.36
Total Water Usage	Total Litres	14,723,000	21,473,000	22,054,500
	Litres / M^2	7.09	7.26	7.69

ASPECT	UNIT OF MEASURE	INDEPENDENTLY VERIFIED DATA		
		2020	2021	2022
Transport (Raw Materials To Site)	Total Deliveries	15,260	39,955	22,257
	Average Tonne / Delivery	24.24	24.29	23.29
	Average Delivery Distance	97.34	47.54	89.7
Transport (Delivery of Products)	Total Deliveries	18,316	44,700	22,960
	Total M^2	2,006,792	2,378,053	2,797,912
	Total Distance (Km)	1,018,698	2,247,215	432,400
Own Waste Recycled Off Site	Total Tonnage	7,718	15,396	17,638
	Kg / M^2 Production	0.004	0.005	0.006
Training and Development	Total Training Hours	494	1,118	1,208
	Total Training Hours / FTE / Year	5.74	12.28	13.13