



## **CEME – Environmental Strategy**

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## 1. Executive Summary

CEME's existence was built on positive change, the ground in which it sits was a former industrial wasteland which has been transformed into a thriving regeneration project that brings business growth and prosperity to the local community. CEME's creation had an immediate positive impact on the environment, eradicating an environmental Brownfield hazard and establishing a centre of excellence.

CEME sees itself as modern, forward thinking organisation that endeavours to set the standard in embracing new innovations. In this regard, CEME is striving to build upon its current achievements in environmental management and establish a long term strategy to minimise the impacts of its activities on the environment.

The following sets out CEME's current performance, its future plans for environmental management, and its reasons for doing so.

## 2. Reasons

There are a number of reasons why a business should establish an environmental management system:

### Moral obligation

There is a moral obligation to do what is right for all of CEME's stakeholders, to control and minimise the impacts of its activities that may adversely affect others. This includes control of waste, pollution and contaminants.

### Legislative

More and more demands are being placed on businesses to comply with environmental legislation, recently this has included compliance with Minimum Energy Efficiency Standards Regulations (MEES) and ongoing Performance Energy Certification (EPC), Climate Levy Charges and Net Zero 2050 targets.

### Carbon reduction

Carbon pollution is proving to have long term and potentially irreversible effects on the environment. Organisations have a corporate and social responsibility to reduce, or offset, carbon emissions. Again, this is increasingly governed by current and future legislation.

### Cost reduction

For a business there are potentially significant financial benefits in implementing environmental initiatives, with many projects offering attractive pay-back periods and return on investment. An example of this is the installation of LED lighting that can reduce energy costs by up to 75% and minimise ongoing maintenance costs to almost zero.

### Winning and retaining business

Environmental management performance is now a key driver in winning and retaining business. More and more businesses are asking for our policy on environmental management as this is part of their criteria for choosing CEME as a partner, and this also flows through to their own clients and supply chain.

### **3. Current Standards and Achievements**

It must be noted that CEME holds ISO14001 accreditation for Environmental Quality Management and has recently successfully renewed this standard in April 2022. This standard evidences CEME's current successful performance in environmental management and is seen as a key accreditation to retain.

CEME's latest projects have included a considerable investment in new building plant technology, delivered by our supply partner, Crowley Carbon, and the widespread installation of LED lighting systems to the internal and external areas of the campus. These initiatives enabled us to meet the MEES legislation that came into force in April 2018 whereby Landlord's need to meet a minimum of an E rating on their EPC's to carry on renting space. We have achieved this rating and kept our status when the EPC was renewed in 2019.

The following is an overview of CEME's current position on environmental initiatives, and our future plans.

#### Carbon Reduction Project

CEME has recently carried out a significant project that is reducing energy consumption on site by £100k each year. This has entailed using the latest building technology, integrating to our existing systems, including:

- Smarter controls of plant and equipment that gain maximum efficiency of running times including; Variable Speed Drives (VSD's), CO2 sensors and Occupancy sensors
- Advanced Building Management System (BMS) technology, allowing greater optimisation of the building system
- Installation of a primary air conditioning unit in the server room to allow main chillers to be switched off during cold spells

The benefits of the project are as follows:

Savings achieved (annualised)

- Electrical 987,322 kWh
- Gas 1,303,200 kWh
- Electrical 350,736 kg CO2
- Gas 239,841 kg CO2
- Savings to date equivalent to taking almost 100 cars off the road

Energy consumption has been reducing since the installation started in April 2016. The cost of the project was £280k and was based on a 2.5 year pay back which has almost been achieved.

### Solar

CEME has an extensive solar array installed on the roof across the whole length of the main building. When first built it was the largest solar installation in Western Europe. It is made up of 843 solar panels (122kwp capacity) and all of the solar energy is consumed on site and fed back into site and the Hydrogen Refuelling Station. The array is coming to the end of its life cycle and CEME are currently planning for replacing, extending and upgrading the installation by the end of 2022.

### Car port

CEME has an electric vehicle recharging unit on the campus, which is powered by its own solar array situated on top of its sheltered canopy. Any energy that's isn't consumed by the recharging point is fed straight into site - this has saved us 75,000kWh in energy usage in 2021. Units were also upgraded in 2017 which has led to quicker charge times.

### LED

CEME has invested heavily in replacing a large majority of its existing, high energy lighting on site, this includes the following:

- Replacement of all its external road and car park lighting
- Replacement of high level lighting in its 25,000sqf workshop
- Replacement to the whole length of main building Street lighting
- LED install to 6x classrooms dedicated to the Ford apprentice programme
- Replacement of all lighting in its 1,500sqf POD Auditorium

The above initiatives have reduced these lighting costs by approximately 70% which are approximately 10% of the total electricity load.

### Water savings

CEME has installed waterless urinals and economic flush systems to our toilets, resulting in usage reducing by around two thirds.

### Recycling

CEME's waste collection partner, Ahern, ensures over 92% of all our onsite waste avoids landfill and is either recycled or reused in some format. Ahern collected 84 tonnes of waste from site in 2019 (pre-COVID). Their 90+ landfill diversion figures are at least equal to their competitors.

### New builds

Any new build projects on site are carried out using best sustainable methods, where possible. Recent mechanical installations have included latest evaporative cooling systems which have minimal impact on the environment and LED motion sensitive lighting is fitted as standard.

### Hydrogen refuelling station

CEME has partnered with a company called Motive Fuels, an energy storage and clean fuel company, and have installed a Hydrogen Refuelling Station on the east car park.

The CEME campus is ideally located on the A13 one of the main East London arterial roads between London City Airport and the M25, providing publically accessible refuelling infrastructure to East London. The CEME solar array also contributes power to the station as all of our solar power is consumed by our facility. The station opened to the public in Q4 2016 and is proving so successful that an upgrade to the unit is currently being mobilised to cope with demand.

CEME are also in the early stages of partnering with the government backed Thames Estuary Growth Board who are focusing on Hydrogen initiatives in the region to reduce emissions by 2.43 million tonnes, support 9,000 jobs and create £3.8bn GVA for the UK economy.

## **4. Future plans**

### Solar

As stated earlier, CEME is currently in the process of upgrading and extending our solar array. The final scheme will incorporate 2,167 PV panels, with an installed capacity of 957kwp – an increase in capacity of 680% and will generate 25% of our total electricity on site. Environmental benefits of this project are as follows:

- **188 homes** – number of average UK family homes that could be powered by the generated power each year for 30 years
- **15,691,000 miles** – equivalent to removing a Ford Mondeo off the road for over 15 million miles
- **21,797,000 units** – units of green electricity produced in a year
- **3,714 tonnes** – total carbon dioxide savings over 30 years

The system will go live in the Spring of 2023.

### Heating Systems replacement

CEME's main building boilers are coming to the end of their life cycle and a tender exercise will be initiated latter part of 2022 for replacement. This will consider the latest energy efficient systems including ground and air source heat pumps and looking at the feasibility of Combined Heat & Power (CHP) systems and commercial battery storage.

### Pavegen

We are in initial discussions with a company called Pavegen that installs specialised flooring surfaces to high level footfall entrances to buildings. The footfall creates energy in the floor surface and is fed straight into grid.

### Green procurement

CEME includes sustainability and environmental management criteria in its tender documents but is looking into how far this can be progressed i.e. making it compulsory that suppliers have relevant accreditation in this area and including Environmental Social and Governance policies. A majority of our suppliers are following best practice and, in-particular, our contract caterers Lexington are doing a substantial amount via their own supply chain regarding provenance, sustainable products, push to zero plastics and influencing positive consumer behaviours.

### Green travel

Green travel scheme. As part of our efforts in reducing the negative impacts on the environment, we are currently establishing green travel schemes in partnership with Havering council. This has included: car share programme; cycle to work scheme; interest free travel loans and a shuttle bus service proposal initiated by the London Riverside Business Improvement District.

## **5. Closing Summary**

CEME is already in a good place regarding its environmental management performance and a lot has been achieved in recent years. It follows the standardisation system of ISO14001, this is an internationally recognised accreditation that establishes us a creditable organisation in environmental management. Despite site population increasing by approximately 45% pre-COVID, CEME has also improved its Display Energy Certificate performance, year on year and is compliant under the MEEES Regulations.

It is essential that CEME is proactive in its endeavours and to stay ahead of ever changing legislation. The senior team are members of the Institute of Workplace and Facilities Management (IWFM) and have a broad network to tap into, staying fully informed and attending training courses as well as relevant industry forums and conferences.

In summary CEME will continue to follow the formal environmental management system of ISO14001 and assess and evaluate projects and new initiatives that arise and aim to be Net Zero by 2030.