

# In the scope: carbon emissions data



We are committed to becoming a carbon neutral business by 2050 with the reduction and elimination of carbon emissions being central to our strategy.

To be able to track the effectiveness of our sustainability actions, it is important to identify what our CO<sub>2</sub> emissions are, where they come from and how they compare to past emissions.

**Under the international Greenhouse Gas Protocol corporate standard, emissions are categorised in three types, called Scopes 1, 2 and 3:**

**Scope 1**

- All direct emissions from the activities of an organisation or under its control, for example burning fuel in kilns and in company vehicles.

**Scope 2**

- Indirect emissions from the generation of electricity, heat or steam purchased from external providers.

**Scope 3**

- All other indirect emissions from activities of the organisation from sources they do not own or control. These cover emissions associated with, for example, purchased goods and services, employee travel and commuting, waste disposal and leased assets.

Cement production is responsible for CO<sub>2</sub> emissions from two primary sources:

1. About two thirds come from the calcination of limestone, the key raw material used to produce clinker, cement's main component. This cannot be mitigated by traditional sustainability actions such as replacing fuels or improved energy efficiency.
2. Much of the remaining CO<sub>2</sub> emitted comes from burning fossil fuels to heat the kilns up to over 1,450°C.

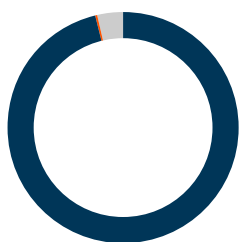
**Did you know?**

**We have achieved a 97.3% reduction in scope 2 emissions from a 2016 baseline.**

**At a glance – our emissions breakdown:**

Ninety per cent of our CO<sub>2</sub> emissions are a direct result of cement production and are classed as scope 1.

Typical Annual Emissions



- Scope 1 = 2,021,454 tonnes CO<sub>2</sub>
- Scope 2 = 6,060 tonnes CO<sub>2</sub>
- Scope 3 = 75,257 tonnes CO<sub>2</sub>

Cement Production Emissions



- Chemistry (70%)
- Fuels & Electricity (30%)

**Some examples of what we can do to reduce our Scope 1, 2, and 3 emissions:**

**Scope 1:** Carbon capture, utilisation and storage (CCUS), alternative carbon neutral fuels, thermal efficiency, greater use of cement replacements such as Regen.

**Scope 2:** All our purchased energy should be carbon neutral, use of energy from renewable sources.

**Scope 3:** Using recycled materials in our production through recycled asphalt plantings (RAP). Reducing emissions with our reduced emission asphalt (REA). Optimising distribution systems and switching from road to rail deliveries.