

FREQUENTLY ASKED QUESTIONS

QUESTION	THE FACTS
Is it true that Irish Cement want to burn 600,000 tonnes of waste?	Platin already has permission to use 120,000 tonnes of alternative fuels which replaces approx. 50% of the fossil fuels in Kiln 3. So the additional 480,000 tonnes covered by this application will allow Platin to achieve over 85% fossil fuel replacement in both Kiln 3 and Kiln 2 and also allow the factory to use alternative raw materials should they be available. This combined total of 600,000 tonnes is the maximum requirement when both kilns are at full production. Platin will not be accepting unprocessed waste and the new fuels will be produced to an agreed specification before being delivered to site.
Won't burning tyres be harmful to public health and the local environment?	Because of the extreme temperatures inside the cement kiln (known as complete combustion) there will be no smoke, no fumes and no increase in emissions. Based on many years of experience in European cement kilns, using tyres as fuel in cement kilns is known to be a safe and efficient solution for unwanted tyres.
Is Irish Cement going to be operating an incinerator in Platin?	The Platin cement factory will continue to make cement, we will simply be using these new fuels as an alternative to imported fossil fuel in the existing cement kilns on site. No incinerator is being built at the cement factory. Under European Regulations using alternative fuels in cement kilns is known as co-incineration. Further replacement of fossil fuels will be achieved on a gradual basis, and any new fuel will be produced to an agreed specification before being delivered to site.
Will there be an increase in traffic?	Because the main objective of this project is to further replace fossil fuels on a gradual basis, there will be a less than 1% increase in future daily traffic volumes. Traffic volumes were modelled following detailed analysis of existing traffic on the local road network and this demonstrated that the project, if it proceeds, will only add an additional 38 deliveries per day when Platin is operating at full production.
Will this project reduce our recycling rates?	No, using this residual waste in cement kilns as fuel supports the recycling industry. In fact, Ireland's Regional Waste Management Plans recognise the increasingly important role that cement factories play in the efficient recovery of residual waste. For more than 40 years cement kilns all over Europe have been using alternative fuels to replace fossil fuels. Many of our European neighbours, like Switzerland and Germany, have achieved high recycling rates and very low landfill rates assisted by the cement industry using residual waste as fuel.
Will this result in the emission of toxins and dioxins?	Cement factories have very low dioxin emissions because of the extreme temperatures inside the cement kiln (known as complete combustion) and rapid cooling of the exhaust air before the filter. The evidence from elsewhere in Europe, where this is a very well-established practice, confirms that the levels of dioxins will remain very low. Hundreds of cement kilns throughout Europe are licenced and monitored by independent environmental authorities and the data over decades confirms that there will be no increase in dioxins.

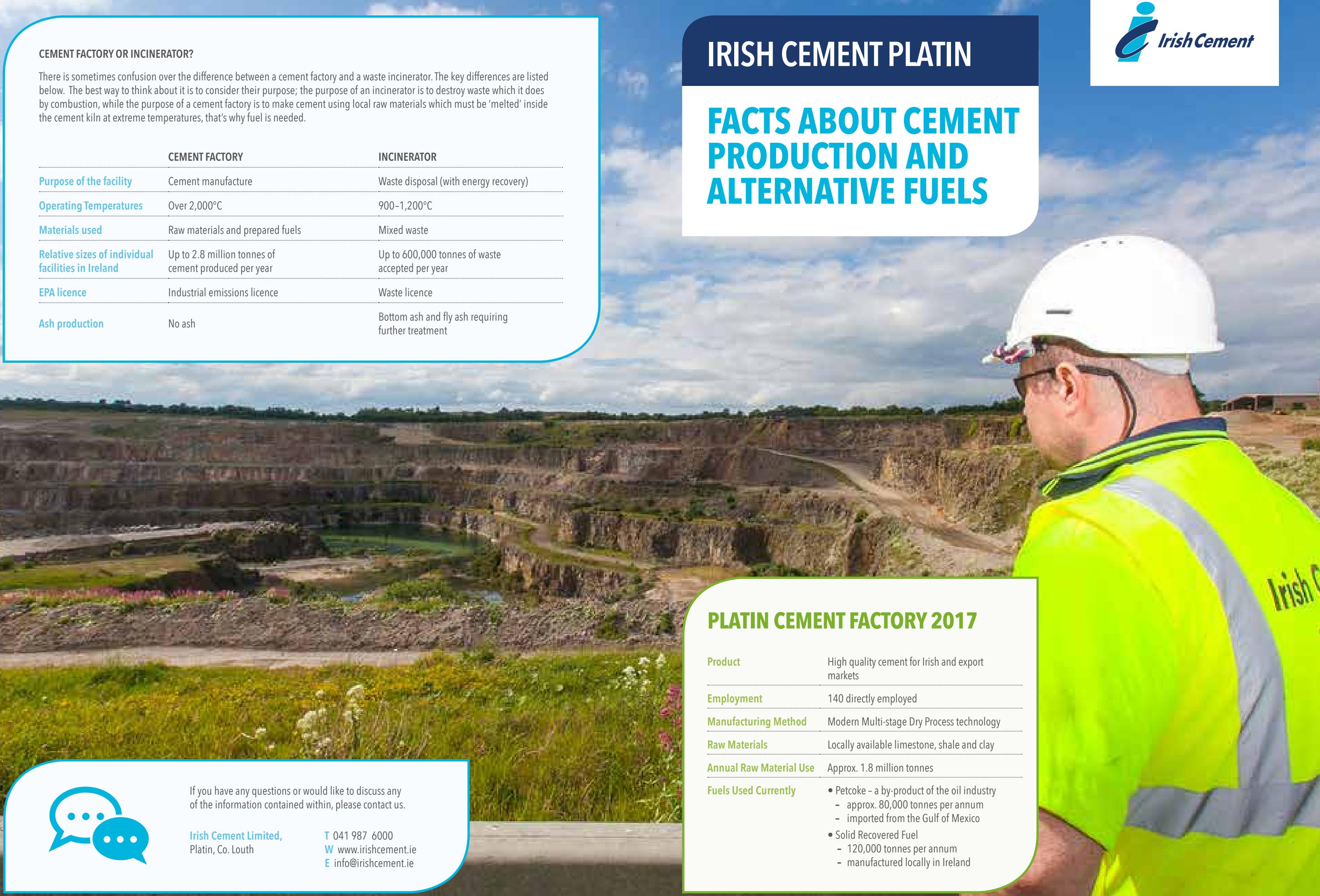
CEMENT FACTORY OR INCINERATOR?

There is sometimes confusion over the difference between a cement factory and a waste incinerator. The key differences are listed below. The best way to think about it is to consider their purpose; the purpose of an incinerator is to destroy waste which it does by combustion, while the purpose of a cement factory is to make cement using local raw materials which must be 'melted' inside the cement kiln at extreme temperatures, that's why fuel is needed.

	CEMENT FACTORY	INCINERATOR
Purpose of the facility	Cement manufacture	Waste disposal (with energy recovery)
Operating Temperatures	Over 2,000°C	900-1,200°C
Materials used	Raw materials and prepared fuels	Mixed waste
Relative sizes of individual facilities in Ireland	Up to 2.8 million tonnes of cement produced per year	Up to 600,000 tonnes of waste accepted per year
EPA licence	Industrial emissions licence	Waste licence
Ash production	No ash	Bottom ash and fly ash requiring further treatment

IRISH CEMENT PLATIN

FACTS ABOUT CEMENT PRODUCTION AND ALTERNATIVE FUELS



PLATIN CEMENT FACTORY 2017

Product	High quality cement for Irish and export markets
Employment	140 directly employed
Manufacturing Method	Modern Multi-stage Dry Process technology
Raw Materials	Locally available limestone, shale and clay
Annual Raw Material Use	Approx. 1.8 million tonnes
Fuels Used Currently	<ul style="list-style-type: none"> • Petcoke – a by-product of the oil industry <ul style="list-style-type: none"> - approx. 80,000 tonnes per annum - imported from the Gulf of Mexico • Solid Recovered Fuel <ul style="list-style-type: none"> - 120,000 tonnes per annum - manufactured locally in Ireland



If you have any questions or would like to discuss any of the information contained within, please contact us.

Irish Cement Limited,
Platin, Co. Louth
T 041 987 6000
W www.irischement.ie
E info@irischement.ie



KEY FACTS	
Cement production	Approx. 2.8 million tonnes each year
Number of kilns on site	Two – known as 'Kiln 2' & 'Kiln 3'
Kiln flame temperature	Over 2000°C
Length of the Kilns	Kiln 2 – 84 metres Kiln 3 – 60 metres
Diameter of the Kilns	Kiln 2 – 5.5 metres Kiln 3 – 5 metres
Residence time inside the kiln	Approx. 20 minutes
Total length of production line	3 kilometres from limestone quarry to bag of cement
Number of filters on site	112
Annual maintenance	The kiln is shut down for 3-4 weeks each year

WHAT IS THE PLAN REGARDING ALTERNATIVE FUELS?

Alternative Fuels (AF) is the title given to a range of fuels used by cement kilns as alternatives to imported fossil fuels. Platin currently has permission to use three types of AF; solid recovered fuel (SRF); meat and bone meal and chipped tyres. Platin used 120,000 tonnes of SRF in 2016.

The use of AF in cement kilns is well known throughout Europe where it is considered 'best practice'. On average 41% of the heat needed by European cement factories now comes from fuels made from residual waste materials, which are pre-prepared to agreed specifications before being delivered.

Platin has already replaced approx. 50% of the fossil fuels in Kiln 3. If we are successful with our application we will aim to achieve over 85% fossil fuel replacement in Kiln 3 and begin replacing fossil fuels in Kiln 2. Replacing a higher proportion of fossil fuels will not lead to an increase in emissions from the factory. The extensive experience from decades of data around Europe confirms the safety of cement kilns, irrespective of the fuel type.

Further reducing our dependence on imported fossil fuel will help to secure the long-term future of Platin and not only lower our carbon footprint by up to 60,000 tonnes of CO₂ per year but also provide a recovery option for local residual waste materials.



CEMENT MANUFACTURING IN PLATIN

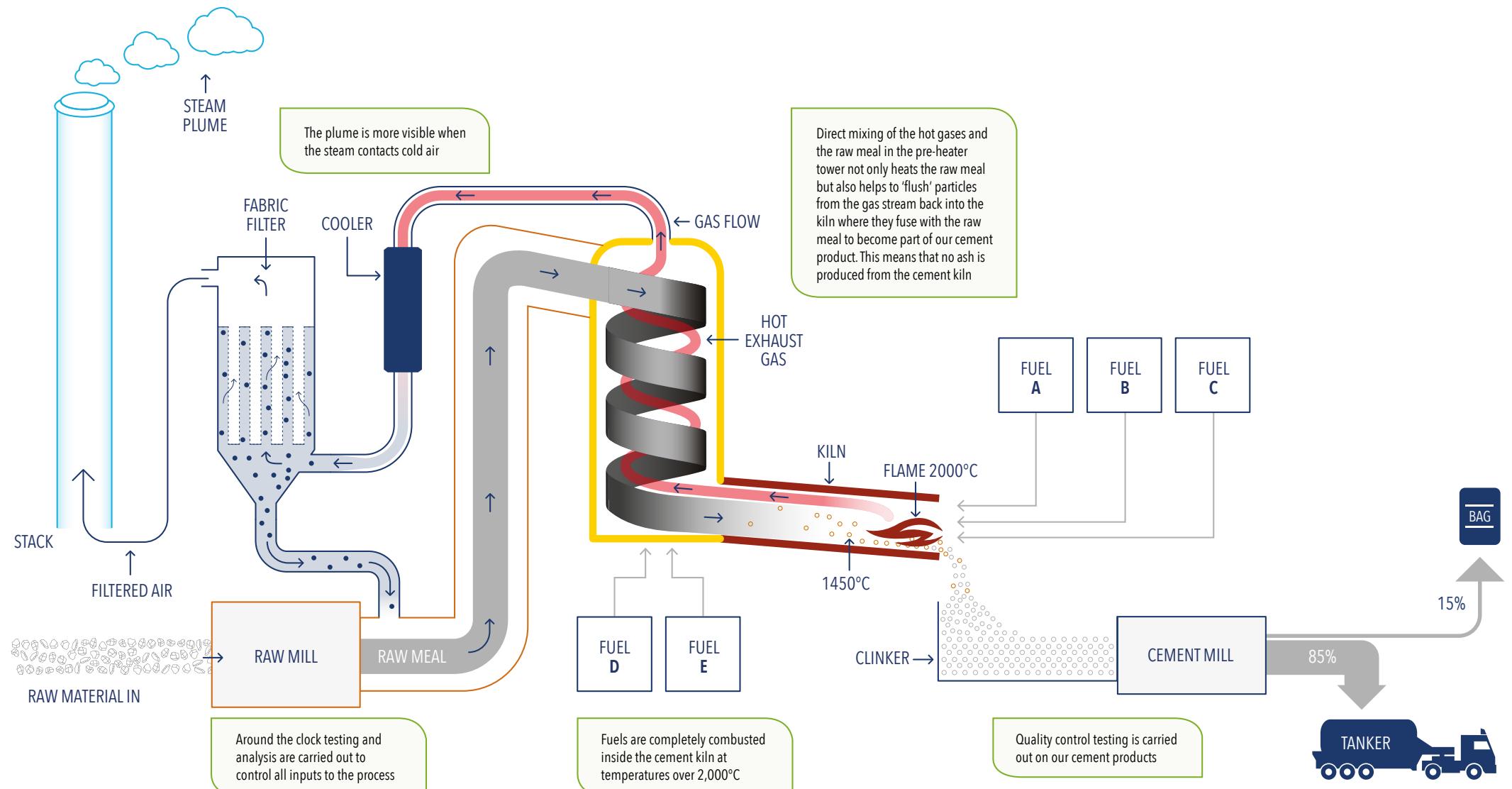
From start to finish, natural rock to final cement product, the raw materials travel approximately 3 kilometres on site. Starting as solid rock, the raw materials are transported from the quarry, crushed into a fine powder and then mixed and blended to a precise composition before being transformed at 1,450°C to molten rock.

The precise composition and carefully controlled temperature allow us to rearrange the natural chemistry of the rocks to form clinker inside the kiln. The clinker is cooled and is stored on site in silos as small solid spheres.

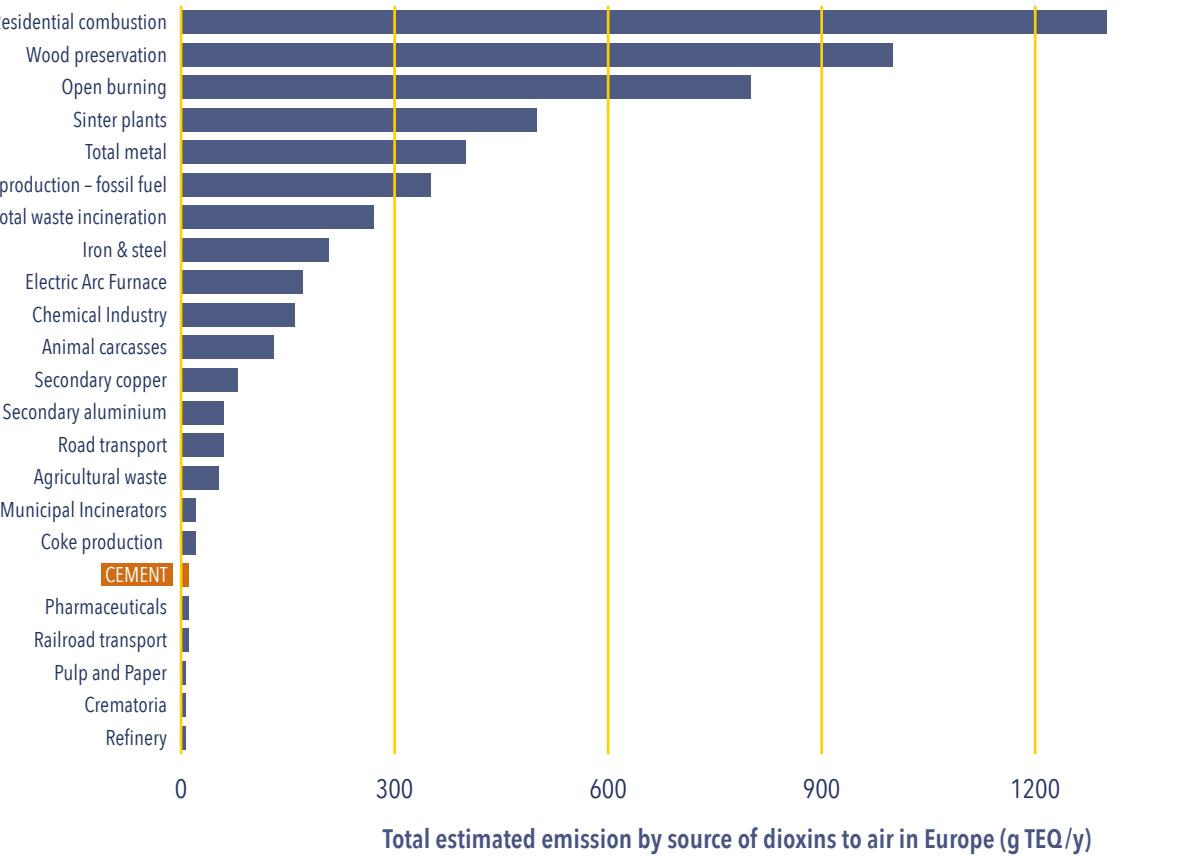
The clinker is transported to the cement mills where it is milled into a fine grey powder which is either packed into 25kg bags or transferred to silos for loading into sealed road tankers. 85% of the cement leaves the factory by tanker.

This high tech, high temperature manufacturing process relies on trained and qualified personnel, complex mechanical equipment and sophisticated sensors and controls. Throughout the process samples are taken to ensure the quality of the process.

View cement production video:
<https://vimeo.com/208682741>



HOW DOES THE CEMENT INDUSTRY COMPARE WITH OTHER SOURCES OF DIOXINS?



European data confirms that cement kilns generally emit very low levels of dioxins and furans irrespective of the fuel types being used. This graph shows that cement kilns rank well below other industrial and non-industrial sources for dioxin and furans emissions in Europe.

Source: European Commission, Brussels "Identification, assessment and prioritisation of EU measures to reduce releases of unintentionally produced/released Persistent Organic Pollutants" - 25 July 2006