



# Ireland's largest cement producer relies on Vecoplan

Reliably supply of pre-heater tower and main burner with daily 840 tonnes of RDF



# Successful conversion to RDF fuel

The Irish Cement plant in Platin has a very high production capacity. This means that the reliable fuel supply for the pre-heater tower and main burner are of central importance. In the conversion to RDF, Vecoplan created a solution that enabled a smooth transition. Sound engineering and leading technologies are the basis for:

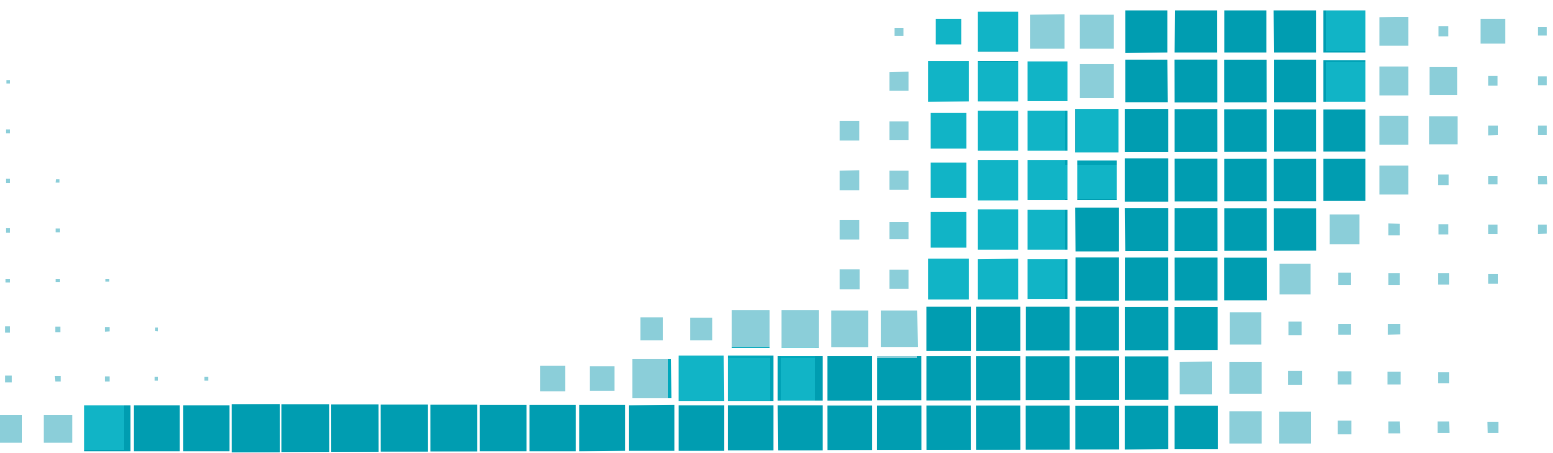
- Constant speed of RDF supply
- Highest level of availability 330 days a year
- High loading and storage capacities with low surface area requirement
- Mixability of dry/moist material prior to fuel chamber injection
- Clean, reliable material flow
- Complete weather-protected conveyor line
- Safe separation of extraneous materials
- Energy-efficient overcoming of further conveyor lines
- Simple expandability of the storage area (modular design)
- High energy efficiency

„Thanks to Vecoplan storage and conveying technology, we were able to convert to RDF hassle-free. The system runs continuously and therefore provides very high process reliability for the RDF supply.

Throughout all phases of the system development and planning, Vecoplan was a reliable partner.

Because of our positive experience with Vecoplan and the high availability of our substitute fuel plant installed in 2009, in 2013 we decided to expand our storage technology in cooperation with Vecoplan.“

Peter La Comber,  
Senior Engineer, Irish Cement



# Conversion to Refused Derived Fuel (RDF)

As the leading cement producer in Ireland, Irish Cement Ltd. is a member of the international Cement Sustainability Initiative (CSI) and promotes sustainability in the cement sector. In this context, its Platin / Drogheda plant converted to RDF use in its cement production to save primary energy and to reduce its carbon footprint.

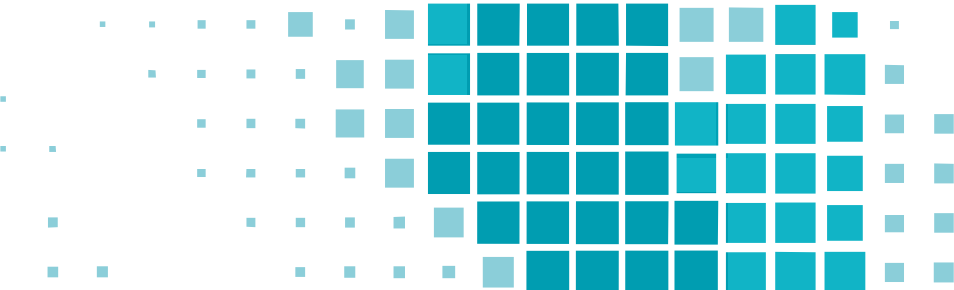
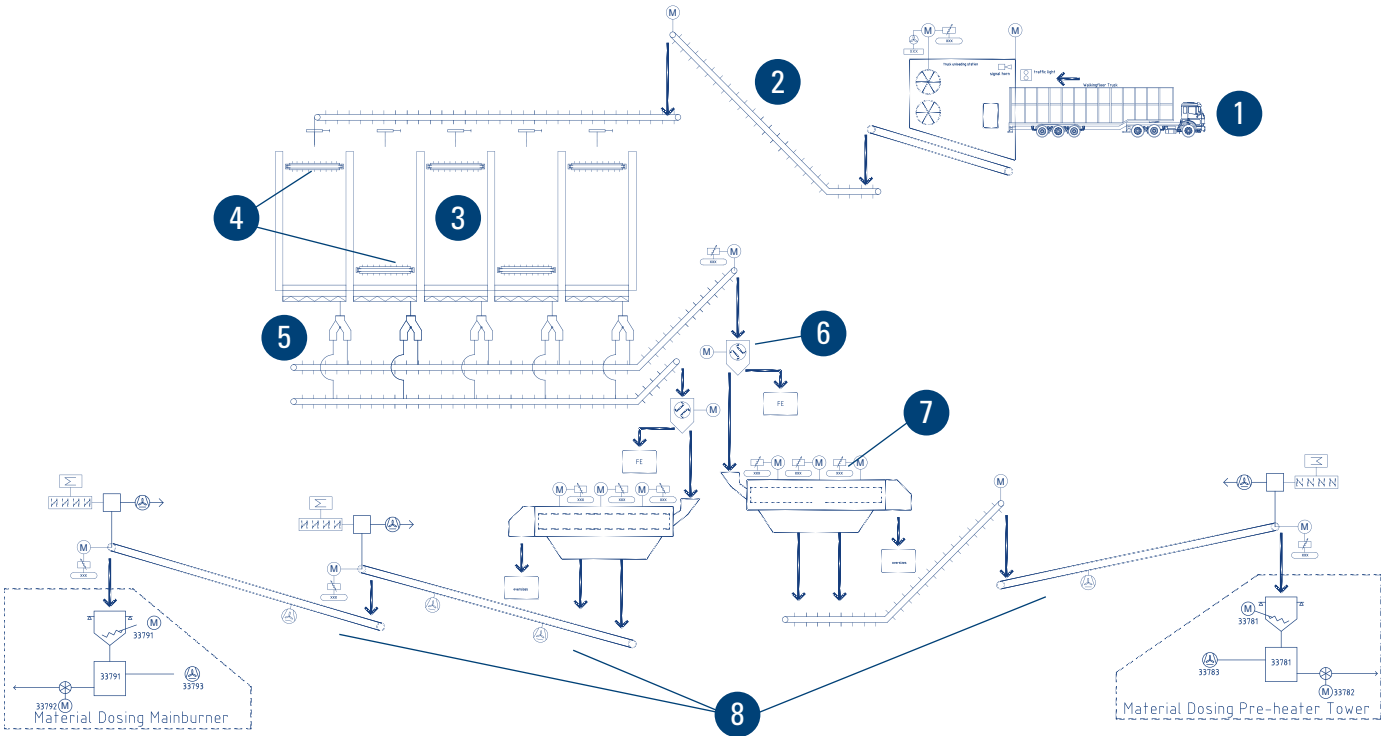
Irish Cement entrusted the design and implementation of the entire RDF conveying process to Vecoplan technology and its extensive project experience. The project required:

- Safe truck unloading with high unloading capacity (300 m<sup>3</sup>/h)
- Completely closed, protected RDF storage and conveyor system
- 5,000 m<sup>3</sup> storage capacities on a small surface area
- Daily conveying quantity of 840 tonnes (330 days a year)
- Mixability of dry and moist RDF material
- High reliability
- High energy efficiency
- Low maintenance costs



# Quicker, more reliable, more constant material flow

All stations of the RDF conveyor and storage system are designed for performance and reliability with full interaction between Vecoplan Engineering and Technology.



# Completely planned by Vecoplan

## Scope of services

For Irish Cement, Vecoplan designed a complete RDF unloading, conveying, storage and loading system. The central task was to create a fast and continually reliable RDF conveyor line with a high daily throughput rate. In an extensive engineering process, Vecoplan developed and implemented an optimal complete system. The Vecoplan services included:

- Design and planning of the complete system
- Supply of Vecoplan system components
- Supervised assembly and installation

## Expansion of storage capacity

After the system more than proved itself in terms of performance and reliability in practice, Vecoplan was tasked by Irish Cement with the expansion of the storage capacities. This option had already been taken into account in the planning phase. The modular design of the system and the individual components meant minimal cost and work were required for the expansion.

- Store 5 was built in 2013
- Thanks to the modularity of the system, components could be easily added at minimal expense
- Thanks to the modular design, no components needed to be replaced
- Aside the standard upgrade time, there were no additional system downtimes



### 1 Truck delivery

- Automatic unloading
- High throughput rate
- Homogeneous material flow



### 2 Robust drag chain conveyor

- Horizontal and steep conveyor lines
- Protected chains (minimised risk of disturbance)
- Closed system (protected from wind and rain)



### 3 Storage building

- 5 storage chambers
- 5,000 m<sup>3</sup> storage capacity
- Separation of material types (moist/dry)
- Complete with the latest storage technology



### 4 Loading and unloading conveyor

- Overhead system
- Low input power of drive, high efficiency
- Loose material discharge (hardly any clumping)



### 5 Screw conveyor discharge

- With hopper for holding material
- Continuous SRF supply
- Mix of moist/dry material



### 6 Drum magnet

- Removal of metal parts
- FE separation



### 7 Disc screen

- Removal of oversized materials
- Coarse material screening
- Clean burning processes



### 8 VecoBelt

- Conveyor belt on air cushion
- Enclosed belt guide
- Durable, high failure immunity, low maintenance





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