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of New XL Hollow-Core Product

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Moore Concrete Sees Significant Growth of PMB Sales with Addition of New XL Hollow-Core Product

Wilbert Moore launched his precast business in 1978, from a small shed, working alone manufacturing cattle slats. The business has transitioned, grown and innovated significantly since those early years, today employing over 160 people. The most recent addition of Redi-Rock XL Hollow-Core Retaining Blocks is helping the company continue to achieve their growth strategies by opening up new markets and geographies.

Moore Concrete transitioned out of that shed in 1984 into the current 13-hectare (32-acre) location near Ballymena in Northern Ireland. The move allowed Moore Concrete to expand beyond the agricultural market and into the building and civil infrastructure sectors, including bringing Redi-Rock precast modular block retaining walls into their portfolio in 2005.

As the first European manufacturer to license Redi-Rock, Moore Concrete continues paving the way for the 20 European licensees today by bringing new Redi-Rock products into their business. They saw the potential of Redi-Rock XL Hollow-Core Retaining Blocks to help them achieve their two-fold growth strategy – to expand the geographical region they could ship their products and to expand the share of the market they could service.

A Place for New Products in Strategy for Growth

“Many of the civil infrastructure projects Moore Concrete are involved in are for road and rail,” explained Richard White-side, head of commercial at Moore Concrete. “Typically, clients would prefer solutions without geogrid, so the XL forms provide an attractive solution opening up additional markets for us.”

At 914-millimeters (36-inches) tall and available in 1320, 1820, and 2440-millimeter (52, 72, and 96-inch) widths, XL blocks range in weight between 1588-2223 kilograms (3500-4900 pounds). The combination of significant weight and width allow the blocks to be used to build walls in excess of 6 meters (20 feet) without geogrid reinforcement.

The hollow-core design allows for reduced weight, which significantly improves freight efficiencies. For Moore Concrete, in addition to being able to meet the growing demand for



A Redi-Rock XL form set up to produce a 1320mm (52in) XL Hollow-Core Block. The form can also be modified to produce 1820mm (72in) and 2440mm (96in) blocks.



Moore Concrete triple casts their standard Redi-Rock forms in one of nine factories on their 13-hectare (32-acre) site.

taller retaining walls, this was also a key component of bringing the system into their portfolio allowing them to expand geographically beyond Northern Ireland.

XL Manufacturing Process

Having invested in a fully-automated Skako system 20 years ago, Wilbert Moore, Managing Director at Moore Concrete, touted the benefits of having mastered their concrete technology.

"The advantage is the Skako is fully computerized, so everything from the aggregate bins to the moisture is automated... it is then transported to the relevant factory by a hopper on rails and poured directly into the Redi-Rock molds," he said.

Over the last 15 years, Moore Concrete has fine-tuned the production of Redi-Rock. They triple cast their standard Redi-Rock forms in one of nine factories on site. While XL forms are quite different in design and require a rebar reinforcement cage, the production process didn't provide too many challenges for Moore Concrete, enabling them to double cast their XL forms.

The XL forming system transitions away from traditional Redi-Rock steel form design by using sliding doors rather than hinged doors. The sliding doors allow for safe manufacturing of blocks of such significant size, and it also allows one form to be modified to pour all three size blocks with bolt-on door extensions.

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Redi-Rock inventory of (left) 2440mm (96in) XL Hollow-Core Retaining Blocks and (right) Freestanding Hollow-Core Blocks, another new product addition for Moore Concrete.



Still poured face down utilizing rubber molds to maintain Redi-Rock's signature stone texture, as well as the knob and groove technology for the blocks to interlock together like giant Lego blocks, Redi-Rock XL blocks fully integrate with the rest of the system to provide great-looking end results.

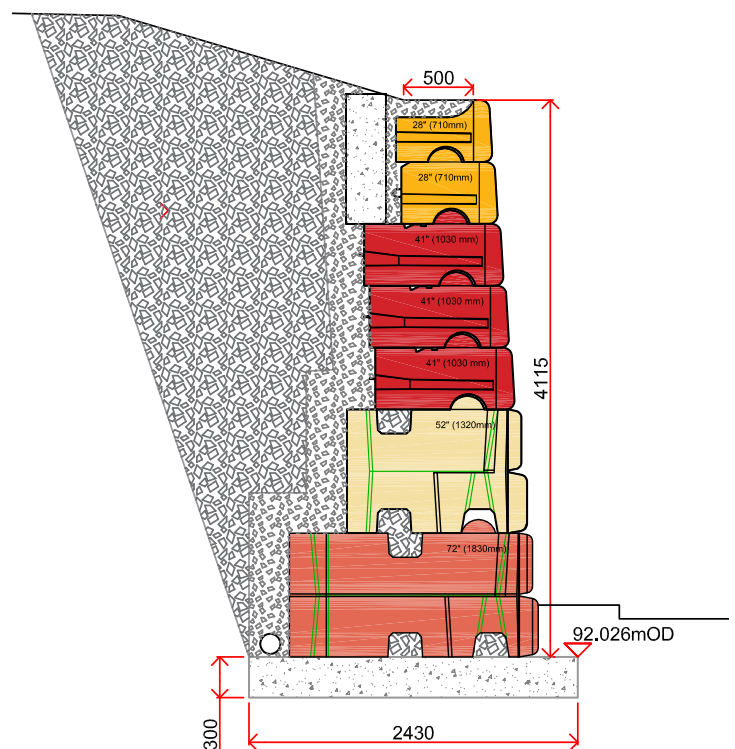
XL Projects Drive Demand

A prime example of the great-looking end results achieved by integrating Redi-Rock XL and standard blocks is a new housing development in Castle Glen, Dungannon. It represents Moore Concrete's largest Redi-Rock project to date and the largest continuous residential Redi-Rock wall in Europe at the time of construction.

Oliver O'Donnell, owner of M&L Property Developments Ltd, had been using segmental retaining walls with geogrid reinforcement. After seeing Redi-Rock at a self-build exhibition in Belfast, O'Donnell did a bit of research, reaching out to a fellow contractor to inquire about Redi-Rock.

"Once I spoke to the other contractor about the installation process and their experience, I decided to try Redi-Rock instead of the segmental block system we had been currently using," said O'Donnell.

The strenuous labor demands of installing segmental walls with geogrid was one reason for making a change, but O'Donnell also recognized another area that Redi-Rock could help him gain more value in his development projects.



A cross section of a 4-meter (13.5-foot) tall gravity wall for the Castle Glen development, including: 1820mm (72in) XL, 1320mm (52in) XL, three 1030mm (41in), and two 710mm (28in) blocks.



The 280-meter (919-foot) long wall hugged the property line of the development, optimizing the buildable footprint and expediting installation compared to a segmental block retaining wall.

"We were losing a lot of space in gardens and along the boundaries due to the excavation and geogrid," he explained. Because Redi-Rock walls can often be installed as gravity walls, where there is no need for geogrid reinforcement, they can often be installed really close to property lines.

"The Redi-Rock system allowed us to follow the boundary of the site precisely along the line as the system easily allows for curves," said O'Donnell. "The seamless integration of the XL blocks allowed us to increase the wall height when needed without having to increase excavation and also reduced the installation time, as each block is over one square meter of face."

The finished retaining wall stretched 280 meters (919 feet), ranged in height from 3-4 meters (10-13 feet), and was approximately 1,000 square meters (10,764 square feet). M&L Property's crew of three – a machine operator of either a 13- or 21-tonne excavator depending on the day, one crew member to hook the block, and another to assist the operator position the blocks – installed the entire wall in under three weeks.

For O'Donnell, the best part of using XL was the reduced cost for freight per area installed and the speed of installation with a lot less labor. He could dedicate manpower to finishing the houses on time while increasing usable land.

More Potential for Growth

The significant scale of the project aligned with a significant growth in Moore Concrete's Redi-Rock sales for the year.

They were projecting to finish 2021 with five times more Redi-Rock sales than 2020. And, the prospect for 2022 is even brighter.

As the Dungannon project wrapped up, O'Donnell had already started conversations with Moore Concrete about his next development project. In addition to repeat customers, Moore Concrete is working with Redi-Rock International to achieve a BBA certification for XL Hollow-Core Retaining Blocks, which will open the doorway for use on larger public projects.

"As the range and use of XL blocks grow," explained Gail Service, commercial manager with Moore Concrete, "the transport efficiencies will allow Moore Concrete to engage with public bodies, designers, and contractors across the island of Ireland." ■

FURTHER INFORMATION

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