

MagnumStone Blends Into Iceland's Scenic Landscape

When thinking of Iceland, a country of approximately 360,000 residents proudly located in the North Atlantic Ocean, what comes to mind? Exploring picturesque waterfalls? The island's diverse geologic history? Perhaps you think of the handsome MagnumStone retaining walls, as seen at Dýralæknameiðstöðin Grafarholti, a local animal hospital in Reykjavik?

Total Block Installed	1,195 sq. ft. (111 sq. m)
MagnumStone Manufacturer	<u>BM Valla</u>
Retaining Wall Engineer	<u>Þórir Kr. Þórisson</u>
Installation Company	<u>Stjörnugarðar ehf.</u>

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Reykjavik, Iceland

Home to the largest geothermal energy heating system in the world, Iceland's beauty, innovation and drive for efficiency are similar to that of [MagnumStone's retaining wall block design](#).

Recognized as the first wet cast big block hollow core retaining wall system of its kind, MagnumStone fits the island perfectly. The hollow core design and gravity extenders provide engineers and architects with more creativity and control in planning retaining walls. For this project, local installation experts Stjörnugarðar ehf maximized MagnumStone's versatility to achieve the vision of engineer Þórir Kr. Þórisson.



■ MAGNUMSTONE MAKES LANDFALL IN ICELAND

Adding to the wonder surrounding the ruggedly strong Icelandic nation, BM Valla began producing MagnumStone retaining walls in 2019. Located in the capital city of Reykjavik, BM Valla is known as a services leader in the country's construction market with high-quality concrete products. MagnumStone's renowned strength and versatility perfectly align with the Icelandic culture of togetherness, hard work and adaptability. These shared traits combined with an environmentally friendly approach made MagnumStone retaining

walls an easy solution for Iceland's infrastructure projects.

The animal hospital, located on the eastern outskirts of Reykjavik, needed to reinforce its parking area before it eroded any further. The MagnumStone gravity retaining wall suited this project well, from aesthetics and functionality to strong weatherproof performance. MagnumStone's ease of installation, beautiful natural facings and ability to maximize surface area made it an excellent solution.

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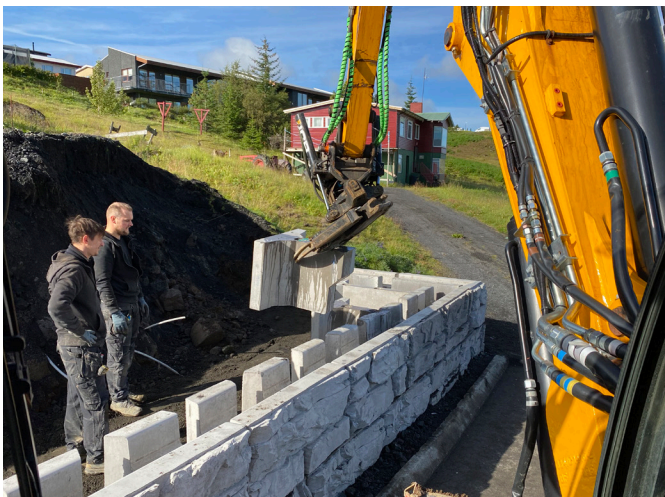
■ BIG BLOCKS PROVIDE FASTER INSTALLATION & PROTECTION

The reality of living on a remote island in the Atlantic Ocean is that wind and storms can roll in quickly mid-installation, therefore time is a valuable commodity. MagnumStone's lightweight hollow core blocks have [40% less concrete](#) than solid concrete systems and each covers 8 sq. ft. (0.67 sq. m.) of facing. This makes the big blocks [more eco-friendly and quicker to install](#). Crews can use smaller equipment and save time by laying more courses to avoid extensive delays of incoming storms. The free online [step-by-step installation guides](#) make construction a breeze to help installers beat fast-approaching storms.

What makes MagnumStone's gravity retaining wall installation even easier – and more environmentally friendly – are the one-of-a-kind [gravity extender units](#). These anchoring blocks seamlessly interlock with standard MagnumStone blocks thanks to the secure tongue-and-groove design. Gravity extenders offer more creativity for custom designs and taller retaining walls with far less excavation area than traditional geogrid walls. Their versatile design includes two unit sizes of 2 ft. or 4 ft. increments, depending on size and considerations of each project.

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GRAVITY EXTENDERS MAKE MOST OF LIMITED LAND

For Dýralækna miðstöðin Grafarholti, the highly-skilled installation team at Stjörnugarðar ehf built this gravity wall with a combination of the 2 ft. and 4 ft. extenders. The hollow core blocks and gravity extenders are backfilled with clean crush gravel which re-strengthens their mass and optimizes drainage.

The new retaining wall eliminated a steep slope that previously ran from the parking lot to the curbed street below. This allowed the team to extend and make the most of the full property atop the wall without excessive excavation. Now that the retaining wall stretches further toward the roadway, the animal hospital has a safer, more spacious parking area.

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■ FUSION OF MAGNUMSTONE FACINGS & ICELANDIC TERRAIN

Unlike urban centers that make retaining walls a focal point, Iceland has a more reserved and inspired approach to design. Priding itself on sustainability and the natural beauty of Earth's elements, MagnumStone's craggy rock facing perfectly fits these historic landscapes.

Given its location in Reykjavik, the animal hospital is uniquely encircled by residences, local businesses, and an outdoor recreation area. A key consideration when installing this retaining wall was that it should not detract from the property's natural scenery. MagnumStone's original facing designs are molded by outcrops of the Canadian Rockies, with an elegant ruggedness that complements the project's surrounding terrain. This helped the team achieve a natural look while not overpowering the location's charming neighborhood atmosphere.

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■ RETAINING WALL BLOCKS DESIGNED TO STAND TALL & STRONG

MagnumStone's hollow core block design provides several core functions which enable engineers and architects to be more creative. The clear crush gravel backfill allows for rainwater and sediments to pass through without clogging or blocking drainageways. This is especially important for infrastructure applications like this gravity retaining wall, supporting a parking lot above and behind.

Iceland is renowned for year-round precipitation; therefore, exceptional drainage is needed for impermeable surfaces like parking lots and paved roads. Without effective drainage, rainfall and stormwater can lead to devastating effects, including wall failures.

Another subtle benefit MagnumStone offers is the ability to install fences directly into the top course of blocks. By building the fence into the hollow core block design, property owners gain an extra couple feet of usable area. Traditional solid concrete retaining wall systems force designers to build fences behind the block, which wastes valuable space.

Dórir Kr. Þórisson and the Stjörnugarðar ehf team took full advantage of MagnumStone's hollow core blocks produced by BM Valla. To ensure the full property was utilized effectively, a 4 ft. (120 cm) tall wooden fence was built directly into the hollow core blocks to increase parking space. The fence also acts as an extra layer of safety for the animal hospital's clients and local pedestrians below.

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RETAINING WALL SYSTEM

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