

FBR completes outdoor pilot build for Wienerberger using Porothersm clay blocks

Highlights:

- FBR completes first structure using Wienerberger Porothersm clay blocks outdoors
- Structure built in European style with 5m high gable ends using Wienerberger's largest blocks (equivalent to 12 standard bricks each) and their own adhesive product
- Demonstrates the Hadrian X[®]'s ability to address the European clay-block low-rise housing market, which has potential for 700,000 homes a year

Thursday, 11 November 2021 – Robotic technology company **FBR Limited** ('FBR' or 'the Company') is pleased to advise that the Company has completed its first house structure using Wienerberger Porothersm clay blocks in an outdoor environment.



Built on the outdoor test slab at FBR's premises, the house structure was built in a style commonly found in Europe, featuring gable ends approximately five metres high. The Wienerberger blocks used in the structure are the largest blocks ever used by the Hadrian X[®] and the largest produced by Wienerberger, and the first clay blocks to be passed through the robot. FBR used two different block types – double leaf blocks for the external walls and single leaf blocks for the internal walls to form a monolithic wall system already approved for use in European markets. Each R25 Porothersm is equivalent to 12 standard bricks.

A shipment of assorted Wienerberger blocks arrived at FBR's premises earlier this year, with a volume of testing completed indoors to ensure the blocks would be suitable for use with the Hadrian X[®]. Upon satisfaction of a number of performance stage gates, the Hadrian X[®] was deployed to FBR's outdoor test slab and completed its first clay block structure in an outdoor environment. The structure was built using

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the two separate adhesive products at different stages of the build. One of the adhesives was that which is usually used by FBR, and the other was an adhesive product already used by Wienerberger with its blocks in Europe.

While FBR and Wienerberger had intended to complete a Pilot Building Program in Europe, the parties undertook an Australian-based Pilot Building Program to enable FBR and Wienerberger to continue to develop their collaboration within the limitations of the economic conditions and travel restrictions resulting from the COVID-19 pandemic, with a view to progressing the commercialisation of FBR's technology with Wienerberger's clay block products in key international territories by demonstrating the commercial operation of the Hadrian X[®] with Wienerberger clay blocks in Australia.

The parties have continued interest in conducting a European Pilot Building Program when external circumstances allow. The completion of the Australian-based Pilot Building Program sufficiently demonstrates the ability of the Hadrian X[®] to work with the architectural style and construction materials commonly found in the European market, where an estimated 700,000 new low-rise homes are built each year.

FBR's Managing Director & CEO, Mike Pivac: "We are very pleased to be progressing our relationship with Wienerberger, the largest producer of clay blocks in the world. Although we expected to have a Hadrian X[®] deployed to Europe this year to complete this Pilot Program, the global conditions caused by COVID-19 have meant that we must conduct the Program here in Australia, with a view to deploying to Europe when conditions have improved such that it makes sense to do so. Both parties are committed to advancing robotic construction together and improving the efficiency, sustainability and digitalisation of the construction industry, and we look forward to continuing our work with Wienerberger."

The next step in the ongoing relationship between Wienerberger and FBR is to conduct further optimisation of both the Hadrian X[®] and the Porotherm blocks to ensure field readiness for European Pilot Programs. FBR will provide updates on this optimisation program as it progresses.

This announcement has been authorised for release to the ASX by the FBR Board of Directors.

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About FBR Limited

FBR Limited (ASX: FBR) designs, develops and builds dynamically stabilised robots to address global needs. These robots are designed to work outdoors using the company's core Dynamic Stabilisation Technology[®] (DST[®]).



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The first application of DST[®] is the Hadrian X[®], a bricklaying robot that builds structural walls faster, safer, more accurately and with less wastage than traditional manual methods. The Hadrian X[®] provides Wall as a Service[®], FBR's unique commercial offering, to builders on demand.

To learn more please visit www.fbr.com.au

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