

CASE STUDY

PFA HELPS TO ENHANCE THE 'GREEN' CREDENTIALS OF AN ECO-FRIENDLY WALL BUILDING SYSTEM

Ash produced at RWE npower's Aberthaw Power Station is being used to manufacture a unique, green alternative to traditional bricks and mortar.



A Durisol block

Pulverised Fuel Ash, or PFA as it is more commonly known, is a by-product of burning coal to produce electricity and is recognised as a safe and versatile construction material.

RWE Power International supplies PFA from Aberthaw and other RWE npower stations, for use in industries such as cement, civil engineering and construction. As well as many other applications, PFA from Aberthaw is now being used by Durisol UK, a specialist, eco-friendly building materials manufacturer, based in Gwent, South Wales.

PFA in Durisol blocks

In 2007, Durisol UK acquired the license to manufacture a unique, modular wall form system in the United Kingdom. The Durisol system has been in use internationally for 60 years and consists of hollow, interlocking blocks that are dry-stacked without mortar and then filled with concrete. This creates solid internal and external walls with excellent thermal and sound insulation. The simplicity of Durisol makes it much quicker and easier to build than traditional bricks and mortar, removing the need for skilled bricklayers and thus reducing the cost of construction.

Although new to the UK market, Durisol has quickly attracted the interest of forward thinking architects and was recently utilised in the construction of Braunton Primary School in Devon, where the speed with which the

system can be assembled was highlighted as a real benefit. Durisol has since been specified for use in the construction of an office complex adhering to the innovative and stringent Passivhaus standard for energy use in buildings.

Why PFA?

Durisol blocks are made by mixing cement with recycled wood chip. The binding matrix used for the blocks consists of cement mixed with 20 per cent PFA, supplied from Aberthaw Power Station. By using PFA, Durisol has been able to further enhance the environmental credentials of the system by reducing the amount of cement required per block, thus helping to reduce the cost of production. In addition PFA is favourable in creating the darker grey colouring of the blocks and providing a workable mix for the manufacture of the blocks.



Durisol blocks used during the construction of Branton School, Devon

Through heavy involvement with the testing process, RWE Power International supported Durisol technically, to develop these blocks for sale and use in the UK.

Speaking of RWE Power International's involvement with Durisol, [Derek Atkins](#), Operations Manager said, *"Using PFA from Aberthaw has helped us to increase the sustainable properties of the Durisol system even further, and with environmental considerations now of the utmost importance in the construction industry, this is extremely beneficial. Also, working with RWE has helped us develop Durisol to ensure we offer the best possible product to the market."*

Further information

Generation Aggregates offer a range of quality lightweight aggregate products for use in the construction and manufacturing industry. These products are manufactured to relevant standards compliant with the Environment Agency/ WRAP Quality Protocol for the production and use of PFA and FBA in bound and grouting applications.

To find out more about supply, specifications and best practice for use, please visit www.generationaggregates.com.



Aberthaw Power Station

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