

Hemel Hempstead set to welcome 'world's most sustainable residential tower'

The town of Hemel Hempstead is poised to welcome the world's "most sustainable residential tower" to its ranks in 2018, after Lumiere Developments unveiled the range of technologies it has turned to in order to create The Beacon.



The technology will be used on future projects and the company hopes that other developers will follow in striving for carbon neutral projects

The 17-storey tower will offer a range of zero-emission studios, one, two and three-bedroom apartments and penthouses, all of which utilise on-site renewables to generate heat and power and offer annual savings of up to £11,000.

Lumiere Developments are offering "free energy for life" to the residents of the new-build as it takes advantage of the 0.8MW solar array across a less than 0.5-acre space - a feat which it claims makes it the highest density solar farm in the world.

"The Beacon is the result of a number of years of extremely hard work by everyone at Lumiere and our partners in the design and planning, to deliver the world's most sustainable residential tower," Lumiere Development's commercial director Ambi Singh said.

"Sustainability is at the forefront of everything we do and we wanted to marry emission free renewable technologies with simple yet effective energy conservation strategies to create a zero emission development that is truly world class in its architectural design, engineering and specification.

"We want residents to feel like they are part of a community and to truly enjoy their living environment. At the same time, we want apartments to be as cost effective as possible whilst ensuring a positive environmental impact on their locality."

Alongside the solar farm, the building will embed solar photovoltaic panels into balustrades on each floor. Ground source heat pumps will extract heat from the building's basement to heat water, while air source heat pumps will extract heat from the atrium. Both triple and quadruple-glazing will be used to keep the heat in.

A Mechanical Heat and Ventilation Recovery System will be used as well as a 100% rainwater harvesting system - which collects at roof and balcony levels. As well as being used for water in the bathrooms, the harvesting system will also irrigate the plants located on each external balcony and the internal arboretum - which is the tallest residential indoor arboretum in the UK.



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Residents will also be granted use of an in-house [electric car and electric bike share scheme](#), which Lumiere claims is a UK-first for a residential development. Residents with cars will also benefit from the infrastructure, with 319 underground car park spaces available from Skyline Parking. The company is able to cut carbon emissions by 80% compared to standard car parks.

On-site waste compaction and recycling facilities are also available and all homes will be fitted with energy efficient A+++ rated appliances.

Lumiere Developments has confirmed that the Beacon will act as a "blueprint" for its zero-carbon residential development in the future. The technology will be used on future projects and the company hopes that other developers will follow in striving for carbon neutral projects - although [three quarters of UK construction companies](#) already operate with low-carbon strategies in mind.

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