

# SUSTAINABLE HOUSEBUILDING WITH THE BERKELEY GROUP

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The Berkeley Group is transforming an extensive site into one of the most biodiverse developments in the UK. The extensive site will eventually comprise of thousands of high specification homes, and a new commercial district with amenities for residents and the wider community.

The Berkeley Groups approach to building for a sustainable future includes reducing the impact of their construction site activities on the environment and local communities, so it was important to have a clean energy and power solution – something which the expertise of Sunbelt Rentals is helping to achieve.

The Berkeley Group initially requested a Temporary Building Supply (TBS) grid connection however, due to logistical reasons this was not possible. So they sought an alternative temporary power solution that was in keeping with the sustainability goals of both site and the Berkeley Group.



## THE CHALLENGE

The site is located in London's low emission zone (LEZ), meaning all NRMM equipment must be of Stage V specification, a government-led scheme created to improve air quality in the area.

The client was seeking to reduce their carbon emissions, fuel consumption and noise by using a greener alternative to standard fuel powered generators.

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## THE SOLUTION

The Sunbelt Rentals team worked hand-in-hand with the Berkeley Group to create a cleaner energy solution in line with the environmental ethos of this impressive housebuilding and regeneration project.

It was originally thought that two 150kVA generators were required to meet the power needs on site.

However, by introducing a bespoke cleaner energy solution it was possible to downsize these to two Stage V 60kVA generators.

This meant the generators met the needs of the LEZ, proving reduced CO2 emissions, nitrogen oxides (NOx) and particulate matter (PM).

A battery storage unit (BSU) was installed alongside the generators, providing a more sustainable and cost-effective alternative to having the generators run 24 hours a day.

The battery managed the load when power requirements were low, (typically evenings and weekends when only essential services such as lighting is needed on site). Working seamlessly with the generators the system can provide uninterrupted power with the battery providing silent, fuel and emission free power outside usual working hours, and being charged by the generator throughout the day.

The cleaner energy solution also included two Peak Power Support 'Flywheels' which also enabled the downsizing of the generators.

Peak Power Support Units capture energy that would normally be wasted and store it in the high-speed energy 'Flywheel'.

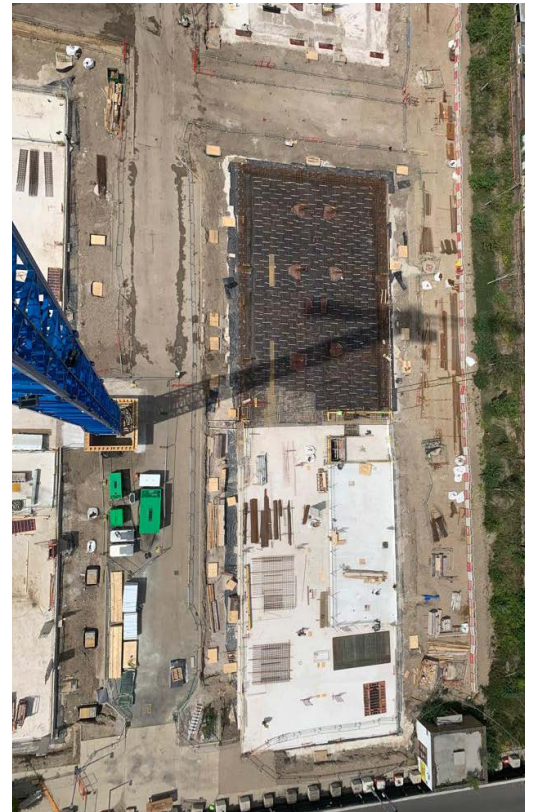
They enable generators to run far more efficiently, with no interruption to the power supply and a significant reduction in fuel consumption and emissions.

## THE RESULTS

The carbon saving results for this project are astounding.

The Berkeley Group has been able to make a carbon saving of 75% due to the clean energy solution with fuel costs reduced by 79% per week.

That equates to a total of 5451.06kg of carbon being saved every week and an estimated carbon saving of 141,727kg over the intended six month period of hire.



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