

Worthing Homes and Sustainable Development



Sustainable development within the current construction context can be challenging, however Worthing Homes have been working hard to re-develop an old and inefficient site to test technologies which are fit for the future.

Although there are a wide range of things that can be done, as a social housing provider Worthing Homes want to be both practical about what will benefit residents and lead the industry toward better practice whilst ensuring value for money. Some of the basics of a new housing development are easy to tweak, but often standardised to make the design process quicker. On this occasion we were able to work within the developers' timescales and look for alternative solutions.

Worthing Homes worked with partners to introduce different plants to the landscape design, to enhance biodiversity for pollinators and help survive changing weather patterns such as high water uptake during shorter periods of heavy rainfall as well as drought tolerance during longer, dryer spells of weather which we expect to see with changing climate.

-Water efficient fixtures and fittings such as showers, toilets, taps are required anyway, but this development specifies slightly lower flow rates, along with providing water butts to capture rainwater for gardening – this should reduce overall water use as much as possible.

Saving energy starts with changing our behaviour, so a fun app is included meaning occupants can participate in challenges running throughout the year, gaining points for sustainable behaviours and hopefully picking up tips to improve along the way too. With any luck the whole community will use this and find out how their energy and water use compares with neighbours and encourage community sustainability through things like car sharing.

Worthing homes have incorporated a fully integrated solution for smart technology to allow occupiers maximum flexibility and mean energy use can be as efficient as possible. This will allow heating, lighting and some plug sockets to be operated through a secure-home management hub. It means that the key functions using energy within the home can be automated. If an occupier wishes to have remote control from their own smart devices, as well as the home management hub provided, they are



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able to link them up and manage from outside the home.

Not only do smart meters help occupants know how much energy they are using and the cost, they will also be key to grid flexibility in the future. These are more or less standard, but this development will be amongst the first with a smart meter for water use.

Insulation makes buildings warm and efficient, but without proper consideration, it could lead to overheating during summer months too. To avoid this, Worthing Homes had a Thermal Modelling Survey carried out to the site plans, to make sure there is enough insulation to make it warm and efficient, but also highlighting the need for special windows to protect homes from overheating

Electric Vehicles are currently expensive and not yet commonplace, but it's likely they will be the future. Underneath the car parking area, ductwork has been included so that electric vehicle charging can be added when there is a demand – this is a low cost, low disruption way to futureproof the development,

These measures combined make a unique development within the social housing context and should provide occupants lots of opportunity to live in a home which has lower environmental impact, as well as providing a valuable learning experience for future sustainable development within the industry.

Worthing Homes and battery storage pilot

Battery storage at home is the key to both maximising the value of renewable energy and the next step in the clean technology revolution. Battery storage technology at home will help the future electricity grid to be a lot more

flexible and meet demand throughout peak times during the day. Smart meters will provide real time information to energy suppliers about demand from the grid throughout the day, and new energy tariffs called 'time-of-use' tariffs will adjust the price of electricity according to how much of it is in the system, for example, on a sunny, windy day in the middle of the afternoon the grid will be full and typically there is low demand from the grid, so it is likely prices will be lowered and this will be the optimum time to buy. Battery storage and smart technology will allow occupiers to access these cheapest tariff rates and reduce bills whilst being greener.

Worthing Homes have been invited to participate in a national pilot of what has been dubbed an 'energy brain and battery storage system'. By charging the battery when grid electricity is cheap the resident can then work out whether it is more cost effective for electricity to be taken directly from the grid, or taken from energy stored in the battery, thereby reducing their bills, hassle free.

The overall findings of the pilot will help understand how effective this kind of system is, and whether different buildings and household profiles benefit equally.

