



FCC Real Estate  
**Smart City**  
Case Study

## The Project

FCC have established a Real Estate business seeking to maximise value from their vast land ownership across the UK.

FCC has a pipeline of sites that are at various stages within the planning process for development of residential and mixed-use, and seeking to explore the benefits and opportunities that exist to establish an ESCo to retail heat, hot water and potentially power on an exclusive basis for each of their proposed developments.

Based on our industry knowledge, expertise and track record within this sector, FCC appointed Ener-Vate to support in the development of a strategic vision to become the principle energy provider under a Smart Energy City approach.

## Our Role

The main tasks undertaken in this project were:

- Meet with the internal teams to further understand the specific FCC ambitions for the project
- Analyse all the relevant information provided by FCC on the project site such as accommodation schedules, planning requirements etc
- Analyse all energy generation plans for the site – proposed scale and timelines for FCC investments into Waste Recovery and energy generation
- Commence the development of an ESCo commercial model – based on known and assumed information for future masterplan areas.
- With this information, develop an initial detailed base case commercial model. This aspect is essential to evaluate the potential value that the heating provision to the site can provide. Once the value is known then decisions on how best to relate and engage with the market can be taken.
- Options appraisal on technologies that provide the best commercial return
- Options appraisal on delivery of the ESCo – attractiveness to sell, partner, retain etc.
- Support in the development of the strategic vision for a Smart Energy City Approach.

- Where deemed appropriate, introduce third party entities to the team for wider service inclusion and expansion options.
- Support in the development of and present the vision to internal FCC and external sources.

## End Result

A collaboratively developed strategic vision for the development and implementation of a Smart Energy City approach with commercial appraisal, highlighting the following key areas:

- Intelligent waste collection facilities to a central collection point for onward processing, recycling and recovery.
- Energy Recovery Facility to generate lower carbon electricity, heat and cooling.
- A district wide underground infrastructure network to delivery heat, hot water and cooling to developments / properties.
- A district wide private electricity network to provide renewable power to customers.
- Satellite resilience energy centres across the network to store, boost and add capacity to meet the demand as the development grows – with technologies that are at the forefront of innovation and able to accept future developments.
- A network of EV charging points to encourage and grow the use of low carbon transport.
- Larger EV charging infrastructure points for public transport operators (buses, taxi, LGV's etc)
- Intelligent use of larger spaces for energy generation and storage from solar gain (large industrial shed roof space, solar farms etc).
- Smart communications platforms to provide rapid access to internet services.
- Smart advertising and communication platforms – intelligent advertising / promotions.
- Smart / intelligent links to public transport.
- Smart / intelligent street and public realm lighting.
- Smart traffic signals and links to city wide SCOOT / urban traffic management.