

This visit was to enable local stakeholders in the Solarise project from Brighton & Hove City Council and also neighbouring Local Authority, Lewes & Eastbourne, to view and learn more about the combined water source heat pump/solar PV install at [Schaffer House](#), Maidenbower in Crawley

This is a sheltered housing scheme operated by Crawley Homes, which consists of 45 tenanted flats, and was built in the early 1990's .

In 2016 the original (1990s) gas-fired boiler system for heating communal areas was replaced with a water source heat pump from the adjacent small stream. The scheme's emitters were also replaced to account for lower flow/return temperatures and a new gas-fired backup boiler was installed 'just in case'. 30kWp of solar PV panels were installed shortly beforehand, providing a free source of electricity to run the heat pump. The scheme benefits from both the Feed in Tariff and Renewable Heat Incentive (RHI). Individual units have their own gas/electricity supply.

The scheme was installed by Mitie, Crawley Homes' Planned Maintenance Contractor and Baystar, a local renewable energy company. It was completed with just internal funding as it could be economically justified as the alternative was to replace the boiler anyway and should pay for *itself* in eight years or less. The total cost was around £160,000 being approximately £80,000 on equipment and £80,000 on construction, there being about three weeks construction work to connect the pipes to the small stream.

It was asked how the residents found the new scheme and, whilst it took a little while to adjust, the home is now heated to a more constant maximum temperature of 23/24 degrees. This contrasts with the previous system, when there was a much greater range of temperatures.

The downside was the need for a moving stream in proximity of the building for it to work, and the number of permits required by the UK Environment Agency when returning water to the stream, even though the water is hardly heated up as the condensers take out most of the heat in the process. An alternative Air Source Heat Pump system would be significantly easier to install, however there would be fewer financial and carbon savings as this technology is less efficient.

This was seen as an interesting project by Brighton & Hove City Council Housing Team as they are always interested in ways of reducing the cost of energy provision in elderly housing, social care buildings and new build social housing, and this was an interesting example of combining two renewable energy sources in one place. We have asked for further details on savings made to help with our own investigations.

If any SOLARISE partner would be interested in further details, please get in touch with [Dan Goodchild](#) – Solarise Contact Officer.