**Tai Tarian, Neath Port Talbot County Borough Council – ORP 3.1**

96 Solar Panels installed to roof space of a housing complex feeding 16 social rented flats

**Background**

96 Solar Panels installed to roof space of Haven Sheltered Housing complex at Ty Maes Marchog feeding 16 social rented flats.  Working towards MCS quality targets.  The project started in and finished in March 2024.

**Project learning**

* The installation of 96 solar panels highlighted the significant potential for generating clean energy to meet the daily needs of 16 flats
* Each property is equipped with an individual inverter connected to six panels, ensuring independent energy conversion and providing an equal share of the array for fairness
* The addition of two communal batteries to store excess electricity enhances on-site energy usage, reducing strain on the grid
* This tailored system effectively addresses the unique requirements of a multi-unit residential building
* By balancing individual property autonomy with centralised energy storage, it offers a scalable model that can be replicated in similar complexes in the future

**Project innovation**

While not necessarily unique, one standout feature of this project was the use of the compact Solax Mini inverters.  Compared to the larger inverters we encountered during a previous Solar PV project, these inverters were significantly smaller, offering a sleek and space-efficient solution.  Their compact size made them easier to install in tight spaces, reducing the visual impact on the properties while maintaining high performance.  Additionally, the Solax Mini inverters provided enhanced monitoring capabilities, allowing for real-time tracking of energy production and usage.  This feature ensures that both contract holders and facility managers can maximise the system’s efficiency.  The combination of these benefits underscored the importance of choosing innovative, user-friendly technology for residential solar projects, enhancing both functionality and aesthetics.

**Challenges**

* The project was scheduled for completion within a short timeframe, from March 5th to March 28th
* One of the initial challenges was working with a separate company for the system design and another as the main contractor for installation.  This created a disconnect, as the installation team had not visited the site prior to starting work
* On the first day, access issues arose when attempting to enter the loft area, delaying progress
* Additionally, the site presented unique environmental challenges, as bats and bees were present and required careful consideration to avoid disturbance
* Working in a sheltered housing complex with elderly residents also added complexity.  Given that some contract holders relied on medical equipment and lifts, we could not fully shut down the electricity during critical checks.  This required meticulous planning and coordination to ensure residents’ safety and comfort while maintaining project progress
* To improve future projects, we would ensure that any project advertised for tender would include a requirement for bidders to conduct a site survey before submitting their proposals.  This would help identify potential challenges early and ensure that the contractor fully understands the site conditions
* Additionally, we would advocate for using a single contractor for both design and Installation for a more joined up approach.