

REN ZERO

Douglas Aitken, Managing Director
Lochlie Construction
Our Renewables Journey

Steps to Net Zero for Business



Your contractor of choice

Our Renewables Journey
41 Johnstone Avenue, Hillington Park

Welcome to Lochlie Construction Group

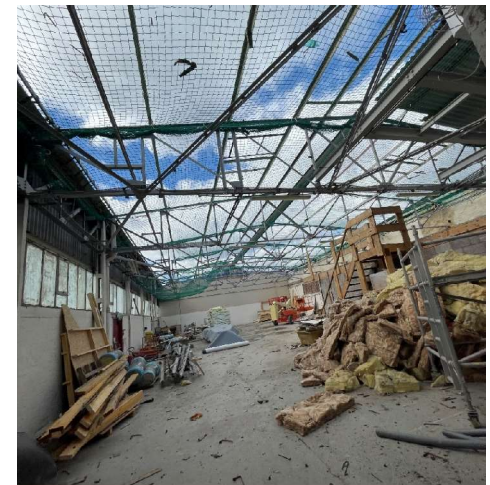


Established in 2014, Lochlie Construction Group offers fully streamlined construction, refurbishment and renewables services across West Central Scotland.

In 2021, we set out to find ourselves a new home and in early 2022, we received the keys to this building - 41 Johnstone Avenue.

In the months that followed, our in-house team worked tirelessly to deliver a tailor-made workplace, with collaboration and sustainability high on the agenda.

In attaining carbon-neutral status, we have achieved so much more than we imagined and learned a lot of lessons along the way! We're so glad to be able to share our journey with you today.



Roof Replacement & Solar Installation



- Original roof removed and replaced
- 150mm Steadman's composite insulated panels, trapezoidal roof



- 38kw Solar PV installation, comprising of 96 panels
- JA Solar 410w panels
- Solis inverter

Solar PV Generation



- Real Time Data
- 9.428mWh generated to date in 2023 - equivalent to driving 27,720 miles in a Tesla or powering 2 four-bedroom homes for a year!

Thermal Efficiency



- Locally Fabricated Aluminium Windows, Doors & Screens

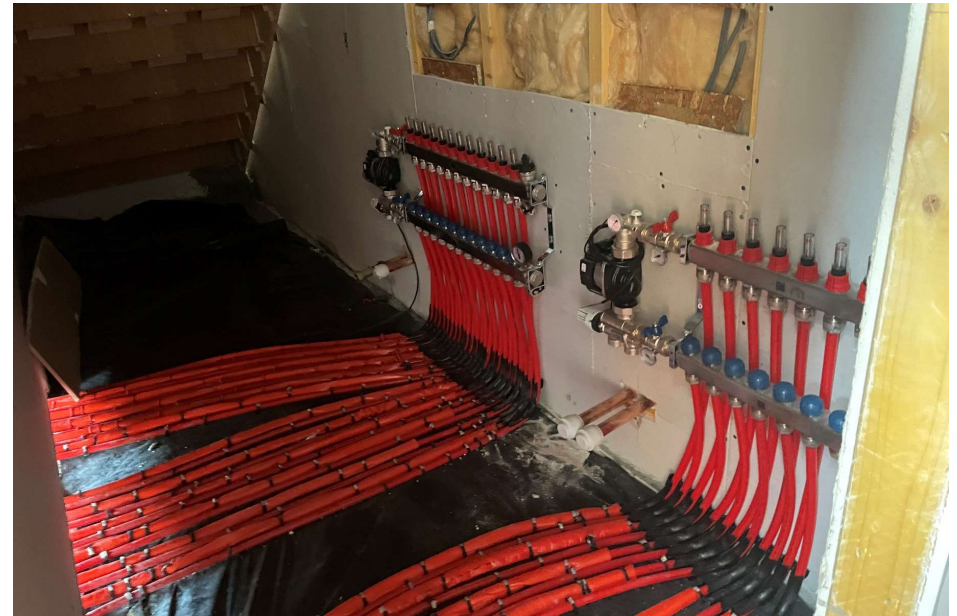


- Thermal Lightweight Aggregate (TLA) floor Insulation

Thermal Efficiency



- Underfloor Heating Installation



- Heating Controls

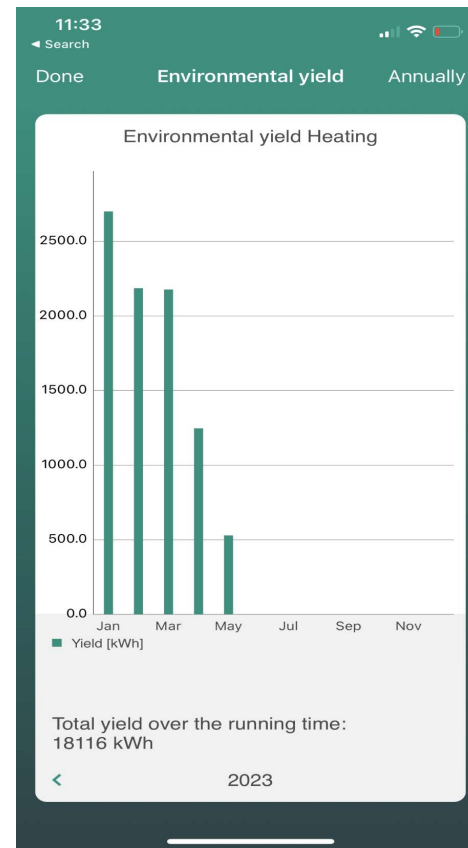
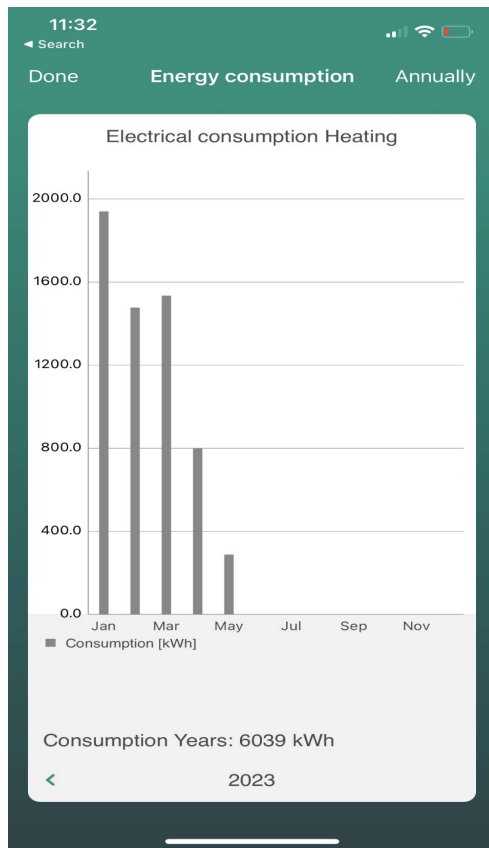
Air Source Heat Pumps



- 2 x 12kw Air Source Heat Pumps
- Underfloor Heating & Hot Water

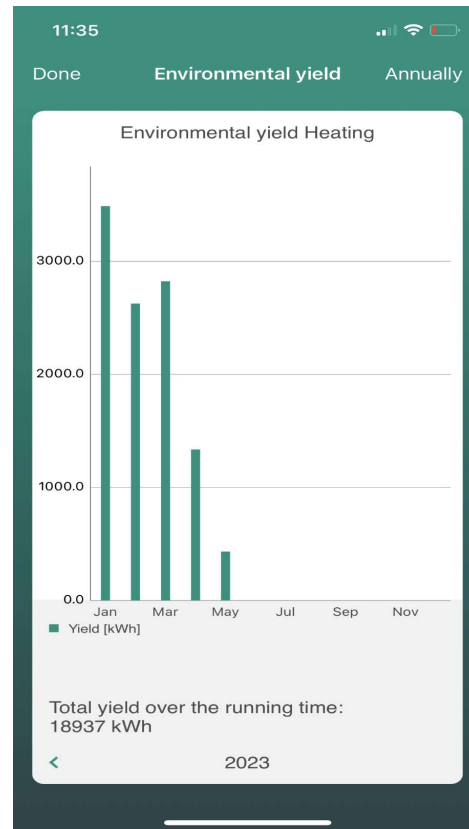
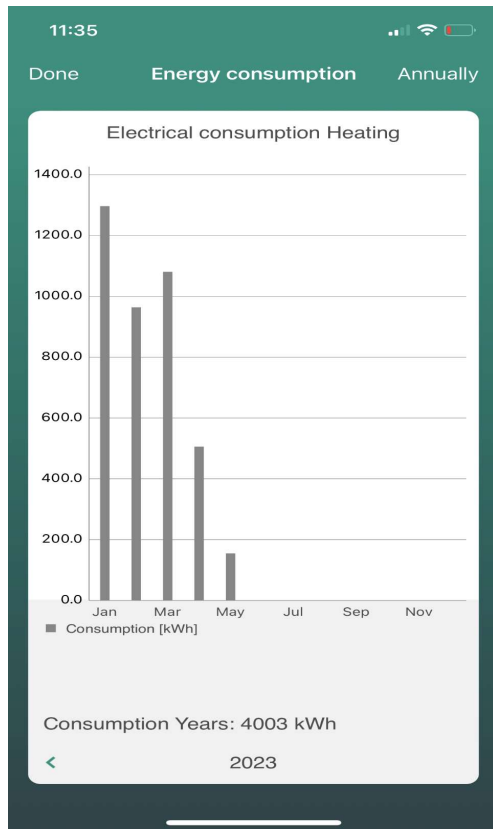


Real Time Data - Pump 1



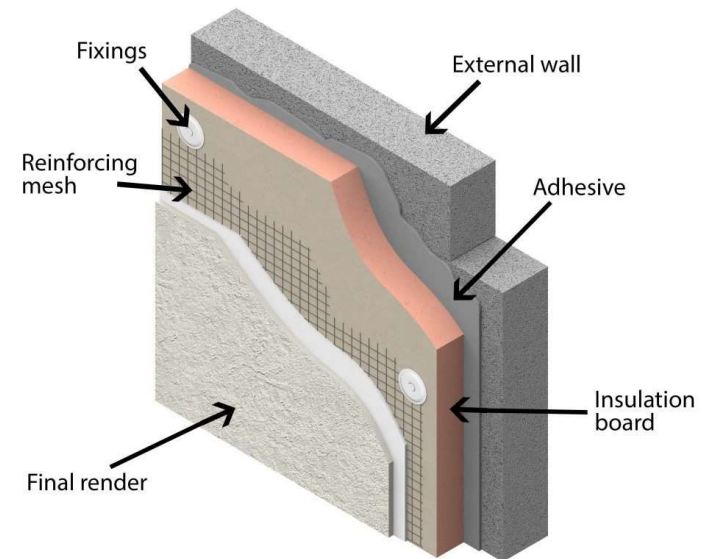
Pump	1	2
Consumption (KW)	6,039	4,003
Output (KW)	18,116	18,937
Ratio	3.00	4.73
Percentage	300%	473%

Real Time Data - Pump 2



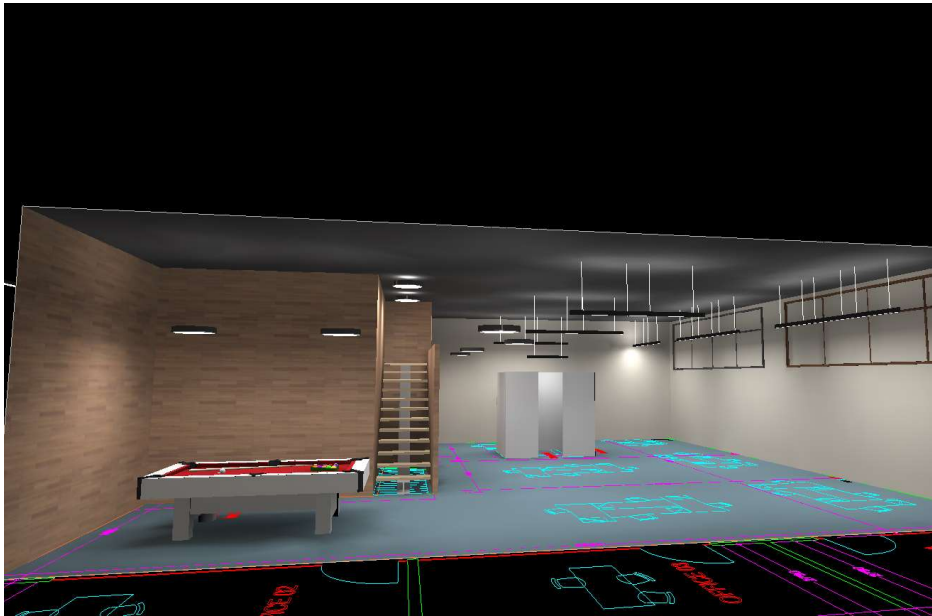
Pump	1	2
Consumption (KW)	6,039	4,003
Output (KW)	18,116	18,937
Ratio	3.00	4.73
Percentage	300%	473%

External Wall Insulation

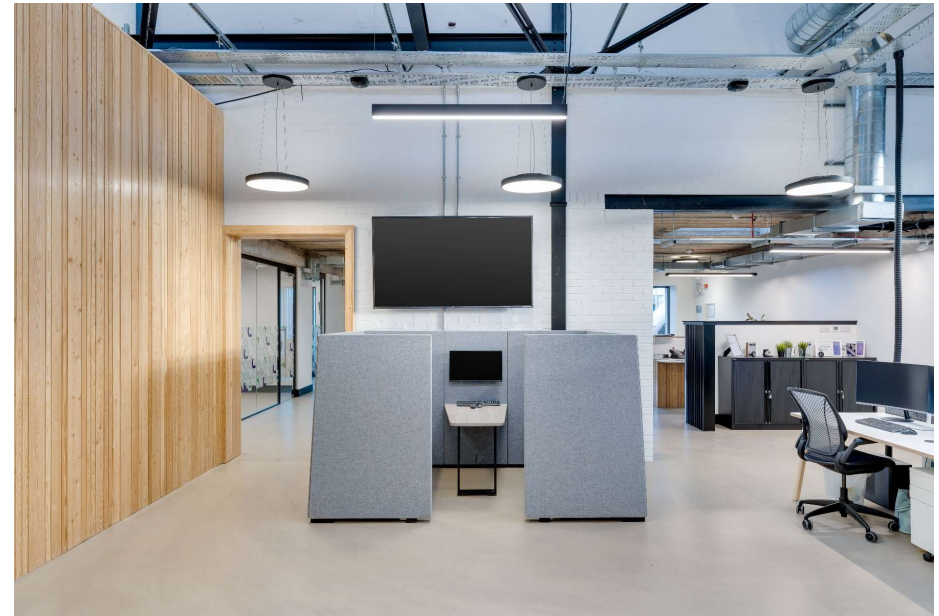


- A method of upgrading the thermal performance and external appearance of a property
- Insulated and rendered properties become warm, energy-efficient and attractive

Lighting Design



- Energy Efficient lighting Design Concept



- Actual installation inline with Concept

Battery Storage & EV Charging Points



- 12kw battery storage
- Solax inverter



- Garo Electric Vehicle Chargers

Funding & Support

There are numerous funding and support options available to SMEs who are looking to take steps towards carbon neutral status. We have accessed a number of these options and will happily talk you through our own experiences if this is of interest.

- Renfrewshire Council Net Zero Business Grant - 50% of project costs up to £10k
- Up to £100K Scottish Government SME Interest Free Loan with Cashback (available while funds last)
- Solar Fast Track Assessment
- Scottish Enterprise Regional Selective Assistance Grant
- Full expensing - eligibility criteria apply. Speak with your Accountant for advice.

The organisations shown to the right are all great resources for learning more about ways you can reduce your business' carbon footprint and funding options to help you on your journey.



Lessons Learned

The road to carbon-neutral was far from smooth for our business. Here are some of the key lessons we have learned from this project, and our advice to any businesses looking to take similar steps.

- **Get Advice** - there is a lot of information out there about net-zero and carbon neutral but it's not all relevant or accurate for your business. Check the qualifications of anyone who is advising you and if in doubt, refer back to Government resources such as Business Energy Scotland.
- **Data is Key** - the more you understand about your own consumption and usage patterns, the better. This will help to determine what solutions will be best for your business. Your energy supplier should be able to provide you with half-hourly meter readings which will show when your peak consumption times are.
- **Trusted Partners & Manufacturers** - ensure that your material suppliers and installers are properly accredited and trusted by your business.
- **Funding** - there is support out there for businesses who are looking to take steps towards net zero. Speak with your local authority, check out the Find Business Support portal, or speak to your contacts at Business Gateway or Scottish Enterprise.
- **Speak to Your Peers** - find out what's happening in your network. A recommendation from a trusted contact can be invaluable when you are unsure where to start.

Lochlie Renewables

Our own journey to carbon-neutral status and learning about the technologies we have installed in our own offices has led us to develop our own in-house Renewables service for businesses.



SOLAR PV & BATTERY STORAGE



ELECTRIC VEHICLE CHARGING POINTS



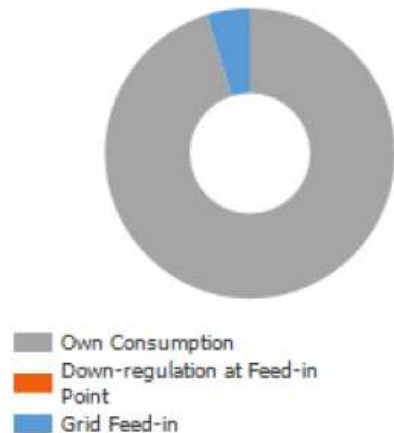
AIR SOURCE HEAT PUMPS



Solar PV Modelling Service

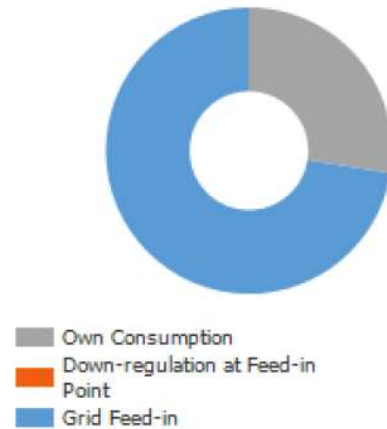
Our own experience when planning and sourcing our solar installation via external installers left us keen to offer something different to our customers. To that end, we have invested and trained our team to offer a specialist solar modelling service using clients' real-life consumption data to design an optimum solar PV system for their business.

PV Generator Energy (AC grid)



Example 1 - High consumption food production facility. Less than 5% of PV generated energy being sent back to grid

PV Generator Energy (AC grid)

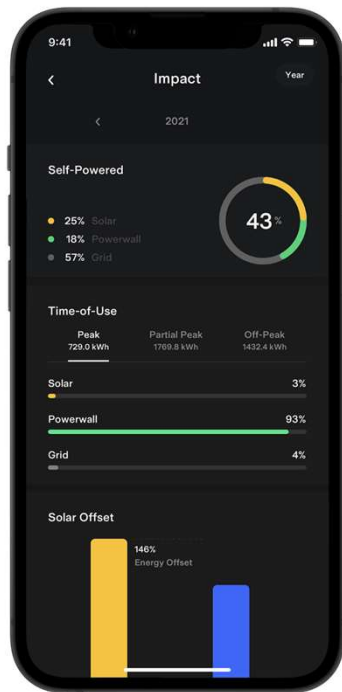


Example 2 - low consumption office building. 73% of PV generated energy being sent back to the grid.

- Desktop exercise
- Free of charge
- Half-hourly consumption data required
- Report can provide forecast of solar yield, carbon savings and potential financial savings plus payback period
- Allows us to model various scenarios for your business

Tesla Powerwall and EV Charging Points

We are proud to be one of a select number of Tesla-approved Powerwall installers in Scotland. Powerwall is a rechargeable battery system for domestic properties that stores energy generated by solar or direct from the grid, and makes it available on-demand. We are also approved installers of their EV Charging Points.



- Self-powering your home
- Home energy monitoring
- Time-of-use load shifting
- Real-time energy monitoring via Tesla app
- Floor or wall mounted
- Child & pet safe
- Quiet operation
- Child

TESLA
POWERWALL
CERTIFIED INSTALLER



Our Team

Our business model has always been to deliver our projects using in-house teams wherever possible. When it comes to Renewables, you can be confident that your project will be planned and delivered by the Lochlie team, who are fully trained and accredited to industry-recognised standards.



MANAGEMENT & SUPERVISION

Our team of Site Managers and Supervisors offer over 100 years combined experience, and are all qualified to SMSTS level as a minimum



LOCHLIE DIRECTLY EMPLOYED TRADES

Our team is made up of over **40** experienced trades people, across all the major trades, including joinery, electrical, plumbing & heating, bricklaying, painting and decorating.



TRAINEES & APPRENTICES

We employ **9** trainees and apprentices at different stages across the main trades and in professional courses like Quantity Surveying. These young people are the future of our business and we invest heavily in ensuring they have access to the best training we can offer.

Trusted & Accredited



We are proud to hold our MCS Certification for Renewables, alongside our full suite of industry recognised accreditations for quality and safety.



CERTIFIED



Thank You

Thank you for attending today's event. If you would like to talk to us in further detail about anything you have seen or heard today, please don't hesitate to contact us. We would love to help you find the best solution for your business.

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