

Resident Engagement Plan

CARBON3

PHONE:

0300 303 5688

WEBSITE:

CARBON3.CO.UK

EMAIL:

INFO@CARBON3.CO.UK



Agenda

01

Document Control

02

Introduction

03

Contact Numbers

04

How it Works

05

Getting Prepared

06

Do's and Don'ts

07

Engagement and Documents at Each Stage

08

FAQs

Document Control

Responsible Department: Operations

Revision History:

Date	Previous Version	Description of Revision
03/11/25	None	First version created.

Introduction

As the UK moves closer to its net zero targets, social housing plays a role in achieving national carbon reduction goals. The sector is estimated to account for around 2–4% of the UK's total carbon emissions, and all social homes are required to reach EPC Band C or above by 2030. This is a significant challenge, not only due to the scale and diversity of the housing stock, but also because the improvement works will inevitably impact millions of residents. However, renewable energy helps lower energy bills and keeps homes warmer, safer, and more comfortable.

At Carbon3, we understand that retrofit projects can be disruptive, which is why we've developed this Resident Engagement Plan. Our approach focuses on minimising disruption to residents' day-to-day lives and ensuring clear, supportive communication throughout every stage of the project. We'll also help residents understand and make the most of their new renewable technologies, empowering them to reduce energy use and benefit from lower bills long after the installation is complete.

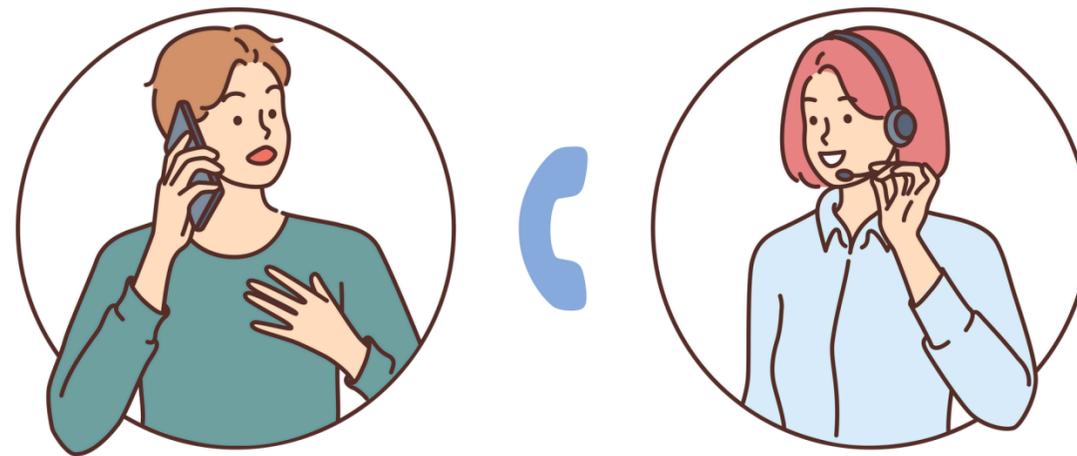


Contact Numbers

Number to call during installation - 0300 303 5688 option 2

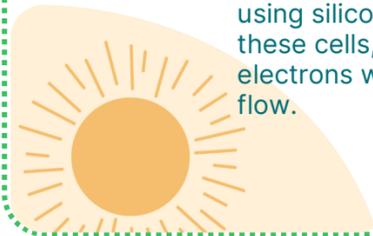
Number to call post completion of works – 0300 303 5688 option 2

24/7 – out of hours emergency number – 0300 303 5688 option 2



How it Works – Solar PV

Sunlight



Solar panels are made up of photovoltaic (PV) cells, typically using silicon. When sunlight hits these cells, it energises the electrons within them, creating a flow.

Electricity

Electricity is a form of energy created by charged particles. The movement of the energised electrons in the solar panels creates direct current (DC) electricity.



Home



The converted electricity is distributed throughout the homes on this site, reducing the amount needed to draw from the national grid.

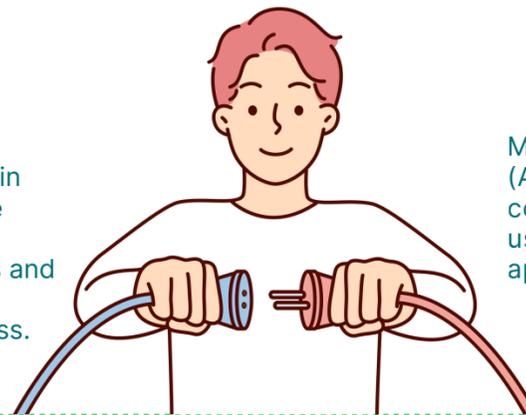
Excess

If the panels generate more electricity than is used, the surplus can be exported back to the grid. Depending on the energy tariff, this can result in savings or financial returns.



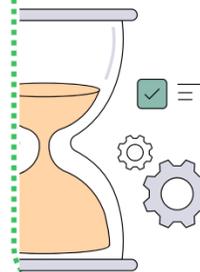
Inverter

DC electricity flows in a single direction, and is commonly used in small electronics and low voltage applications. AC flows in alternating directions and is easier to transmit over long distances with minimal energy loss.



Most buildings use alternating current (AC) electricity. An inverter is used to convert the solar-generated DC into usable AC, ready to power lighting, appliances, and other systems.

Long-term



Solar panels operate quietly, with no moving parts, and require minimal maintenance. Over a lifespan of 25+ years, they provide consistent, reliable renewable energy to help lower energy costs and reduce emissions.

Carbon

Generating electricity from fossil fuels (like gas or coal) releases large amounts of CO₂ into the atmosphere. Solar power, by contrast, is a zero-emissions technology once installed. Every kilowatt-hour of solar energy used is one less drawn from carbon-intensive sources.

How it Works – ASHP

How it works

1. Outdoor unit: The fan draws in air and extracts heat from it using refrigerant.
2. Compressor: The refrigerant is compressed to increase the temperature.
3. Indoor system: The heat is transferred into your heating and hot water system: radiators, underfloor heating or a hot water cylinder.
4. Refrigerant cycle: The cooled refrigerant then goes back outside to collect more heat, repeating the process.

It's like an air conditioning unit, but in reverse. Instead of removing heat, it brings it inside.



How to use

- Set it and forget it: Heat pumps work best when running steadily, not being turned on and off like a boiler.
- Use your thermostat: Set a comfortable room temperature and let the system maintain it automatically.
- Check radiators: They'll feel warm rather than hot. This is normal and helps the system stay efficient.
- Hot water: Your system will heat water at set times each day; you can adjust these in your controller if needed.
- Keep space clear: Make sure the outdoor unit has good airflow and isn't blocked by plants or objects.



What it does

Your new air source heat pump (ASHP) keeps your home warm and your hot water running using renewable energy from the air around you instead of gas or oil.

Even when it's cold outside (as low as -15 degrees), there's still heat in the air, and your heat pump captures that heat and moves it into your home.

Benefits

- Lower bills: Heat pumps are far more efficient than traditional heating systems, using less energy overall.
- Comfort all year round: Steady, even heat that keeps your home warm without sudden changes in temperature.
- Better for the planet: Using the air's natural heat means fewer carbon emissions.
- Safe and reliable: No combustion, no flues, no risk of carbon monoxide.

Long-term impact

Your air source heat pump is designed to last for many years with minimal maintenance.

Regular servicing will keep it efficient, ensuring lower running costs and reliable comfort for you and your household. This will be arranged by the council.

How it Works – EV Chargers

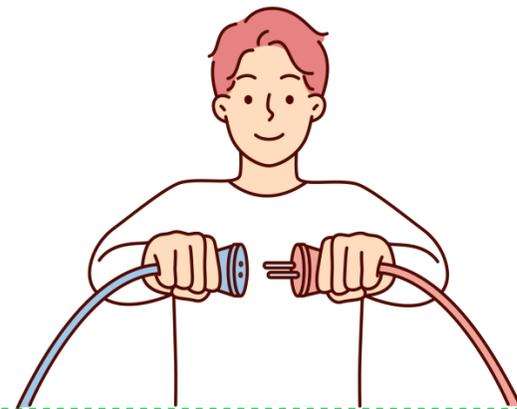
How it works

1. Connection: Plug your EV into the charging unit using the supplied cable.
2. Communication: The charger and your car “talk” to each other to confirm it’s safe to start charging.
3. Charging: Electricity flows from the flat communal electric supply to your vehicle’s battery.
4. Complete: When the battery is full, the charger automatically stops delivering power.
5. Cost: This will depend on the agreement your housing provider has with your block of flats - they may charge cost price, or it may be free for your use as a resident.
6. If your flats have solar panels or battery storage, your EV charger can use that renewable energy to power your car, making every mile even cleaner.



How to use

- Plug in when parked: The easiest way to keep your car ready is to plug in whenever you’re home.
- Check the lights: Most chargers use simple light indicators, like green for charging, blue for ready, red for error.
- Stay connected: Make sure the charger’s Wi-Fi or smart connection is active to access usage data and updates.
- Keep it clear: Avoid blocking airflow or covering the charger with objects.



What it does

Your electric vehicle (EV) charger allows you to safely and efficiently charge your car at home using electricity. This will help you save money, reduce emissions, and travel sustainably.

It’s quick, convenient, and much cheaper per mile than petrol or diesel.

Benefits

- Lower running costs: Charging an EV can cost less than half the price per mile of petrol or diesel.
- Cleaner travel: Driving electric means zero tailpipe emissions, improving local air quality.
- Simple and safe: Built-in safety systems automatically stop charging when your car is full or if a fault is detected.

Long-term impact

Every charge helps reduce carbon emissions and running costs, supporting a cleaner, more sustainable transport future.

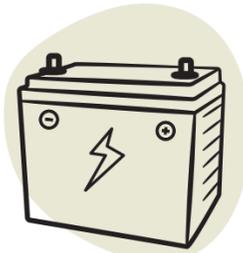
Your EV charger is built for long life and low maintenance, but if any maintenance is needed, your housing provider will carry this out.

How it Works – Battery Storage

How it works

1. Charging: During the day, when solar panels or the grid produce more electricity than is being used, the batteries store the excess power.
2. Storing: The system safely holds this energy in rechargeable lithium-ion batteries until it's needed.
3. Releasing: When energy demand increases, such as in the evening, the stored electricity is released to power lights, appliances, or heating.
4. Smart control: The system automatically decides when to charge and discharge to make the best use of available energy.

It's like having an energy savings account; storing power when it's cheap or plentiful, and using it when it matters most.



How to use

If your battery system is in a communal area:

- You won't need to do anything to use them as the system automatically supports your home's energy supply.
- You may notice more stable energy usage and lower shared electricity costs for communal areas like hallways or lifts.
- The system is monitored remotely by qualified engineers to make sure it's always safe and performing efficiently.

If you have a battery in your home:

- Your battery will usually charge when your solar panels generate excess energy or when electricity is cheapest.
- It will automatically release energy when your household needs it, for example, during the evening.
- You can track performance and savings through your home energy app or display screen.
- Always keep the battery unit clear of clutter and don't attempt to open or move it.

What it does

Battery storage systems store electricity so it can be used later when energy demand or prices are higher. In your building, batteries help make the most of renewable energy (like solar) and keep electricity costs lower for everyone.

If you have a battery installed in your home, it works in the same way; storing energy for your own use.

Benefits

- Lower energy bills: Store electricity when it's cheaper and use it when prices rise.
- More renewable energy: Use more of your own clean, locally produced power.
- Reliable supply: Batteries help balance energy use and reduce grid demand during busy times.
- Quiet and safe: Modern battery systems are compact, quiet, and built with advanced safety features.

Long-term impact

Battery storage makes renewable energy go further, helping reduce carbon emissions across your building and community.

Whether installed in your home or shared among residents, it's a smart step towards a more efficient, affordable, and sustainable energy future.

Getting Prepared –Solar PV

Getting prepared for the install – what we need from you:

- Clear out loft – we will be accessing the loft space
- Move anything valuable in and around the working areas i.e. TVs/computers etc

Day 1-2

- Lead engineer will explain the installation plan
- Scaffold erected for solar PV

Day 2-3

- Installation of solar PV system on the roof
- Electricians will be connecting up fuse board and PV

Day 3-5

- Final day – commissioning and demonstrating the systems – feel free to video the demonstration so you can look back in the future if you forget any aspect of the demonstration. A how to guide for each of the systems installed will also be left with you.
- Clear down and tidy up

Note - Scaffolds will be removed within 1 week of completing works.

Remember any issues with the systems once complete please call the post completion works number at the beginning of this document, or if we're still on site, feel free to come and have a chat with us.

Getting Prepared –ASHP

Getting prepared for the install – what we need from you:

- Clear around radiators so they can be changed
- Clear out cylinder cupboard
- Move anything valuable in and around the working areas i.e. TVs/ computers etc

Day 1-2

- Lead engineer will explain the installation plan
- Installation of heat pump outside and hot water cylinder inside – we will be removing your gas boiler and will leave you with temporary heaters/ hot water. Note there maybe a day or two during the transfer whereby you won't have heating.

Day 2-3

- Installing new pipework, and radiators. Connecting heat pumps and solar PV if you've had PV installed as well.

Day 3-5

- Final day – commissioning and demonstrating the systems – feel free to video the demonstration so you can look back in the future if you forget any aspect of the demonstration. A how to guide for each of the systems installed will also be left with you.
- Clear down and tidy up

Remember any issues with the systems once complete please call the post completion works number at the beginning of this document, or if we're still on site, feel free to come and have a chat with us.

Getting Prepared –EV Chargers

Getting prepared for the install – what we need from you:

- Remove your car from the designated EV charger spaces.

Day 1-2

- Lead engineer will explain the installation plan
- EV charger groundworks will be carried out

Day 2-3

- Installation of EV charger and barrier if necessary.

Day 3-5

- Final day – commissioning and demonstrating the systems – feel free to video the demonstration so you can look back in the future if you forget any aspect of the demonstration. A how to guide for each of the systems installed will also be left with you.
- Clear down and tidy up

Remember any issues with the systems once complete please call the post completion works number at the beginning of this document, or if we're still on site, feel free to come and have a chat with us.

Getting Prepared – Battery Storage

Getting prepared for the install – what we need from you:

- Clear out cupboard or space where we're fitting the battery if you will have one in your home.
- If the battery storage will be communal, you won't need to prepare anything.

Day 1-2

- Lead engineer will explain the installation plan

Day 2-3

- Installation of battery storage systems in the home or communal area
- Electricians connecting battery storage to solar PV system if there is one

Day 3-5

- Final day – commissioning and demonstrating the systems – feel free to video the demonstration so you can look back in the future if you forget any aspect of the demonstration. A how to guide for each of the systems installed will also be left with you.
- Clear down and tidy up

Remember any issues with the systems once complete please call the post completion works number at the beginning of this document, or if we're still on site, feel free to come and have a chat with us.

Do's and Don'ts – Solar PV

Do's

- Leave the power diverter on to the immersion heater at all times – kills bacteria and provides you with free hot water when the sun's out from the PV system.
- Make sure you have a smart meter and you register for the smart export guarantee to receive payments on the electricity you don't use.
- Keep an eye on your smart meter display and ensure you use your appliances etc when the PV is generating more electricity than you need to save you money.
- If you are on a smart tariff where energy is cheaper at night do the calculations to ensure you make best use of the free electricity – it might not always be better to use the free electricity if the appliance you are using uses more electricity than the free amount produced by the system at time of use.
- If you have any questions please ask.

Don't

- Turn off the PV system – it is saving you money. If you turn it off it won't work and your electricity bill will increase
- Be afraid to ask questions – we are here to help.

Do's and Don'ts – ASHP

Do's

- Keep the outdoor unit clear of leaves, plants, or debris so air can flow freely.
- Set your thermostat and let the system maintain a steady temperature as it works best running consistently.
- Have your system serviced regularly by an approved engineer to keep it efficient (your housing provider will be responsible for this).
- Check that radiators or underfloor heating are warm (not hot) as this is normal and most efficient.
- Contact your housing provider if you notice unusual noise or performance changes.

Don't

- Don't cover or block the outdoor unit because this reduces efficiency.
- Don't turn the system on and off daily like a boiler, this uses more energy.
- Don't attempt to open panels or adjust internal settings yourself.
- Don't dry clothes or store items on or near the indoor unit.

Do's and Don'ts – EV Chargers

Do's

- Use your charger's app or timer to charge during off-peak hours for lower costs.
- Keep the charging cable tidy and check it for damage before use.
- Ensure the area around the charger is dry and free from obstruction.
- Report any fault lights or issues to your housing provider or installer.

Don't

- Don't use extension leads or adapters, always connect directly to the charger.
- Don't cover or block the charger vents.
- Don't leave cables across pathways where they could cause trips.
- Don't try to repair or reset the charger yourself if it shows a fault.

Do's and Don'ts – Battery Storage

Do's

- Keep the area around the battery unit clear and well-ventilated.
- Allow the system to operate automatically, it will charge and discharge as needed.
- Monitor energy use through your display or app if available.
- Report any alerts, unusual noises, or heat to your housing provider immediately.
- Ensure annual servicing or inspections are completed by qualified engineers.

Don't

- Don't store items against or on top of the battery unit.
- Don't block airflow vents.
- Don't open, move, or tamper with the battery system.
- Don't expose the unit to water or moisture (for example, during cleaning).

Engagement at Each Stage

Pre-installation

- Engage residents with survey/engagement days/letters/phone communication
- Consult with residents on design
- Resident Engagement Officer to speak to residents to confirm program
- Help residents understand the work involved and benefits
- Establish resident needs/vulnerabilities and cater for these

During Installation

- Carbon3 site lead will take residents through delivery process
- Carbon3 lead will have a resident-focused approach
- Residents will be kept informed of project progress and any delays
- Understand residents will be disrupted and keep this to a minimum



Post-Installation

- Post installation handover pack for residents including how to use renewable technologies installed and register for the benefits (SEG)
- Resident Engagement Officer to be on hand for questions post-completion
- Survey for residents to gauge satisfaction and comfort

Documents at Each Stage

Pre-installation

- Current EPC certificate
- Program
- Support services
- Outcomes of works
- Our accreditations
- Installation team information
- Explainers

During Installation

- User guides and videos for renewable technologies
- Installation team's contact details

Post-Installation

- Feedback survey
- Information on seasonality
- Maintenance information and timelines
- Inspections



FAQs for Solar PV

Will solar panels power my whole home?

Not entirely, they'll reduce how much electricity you need from the grid, but you'll still be connected to your usual supply.

Do I still get electricity on cloudy days?

Yes. Solar panels still generate energy even when it's cloudy, just less than on sunny days.

What happens at night?

Panels only generate electricity in daylight. At night, your home uses electricity from the grid or from your battery if you have one.

Will I notice anything different inside my home?

No, your lights, appliances, and sockets all work exactly the same.

Do I need to turn anything on or off?

No, your solar system works automatically.

Can I save more money by using appliances at certain times?

Yes. Using electricity during the day (when the panels generate) helps you make the most of your free solar energy.

What maintenance do solar panels need?

Very little; just occasional cleaning and regular system checks by our maintenance team. Your housing provider will organise this.

What if there's a power cut?

Your panels won't power your home during a power cut unless you also have a battery with backup capability.

FAQs for ASHPs

Will my home still be warm enough in winter?

Yes, heat pumps work efficiently even in cold weather, down to around -15°C.

Why do my radiators feel cooler than before?

That's normal. Heat pumps provide steady, gentle warmth instead of very hot radiators.

Can I turn the heating on and off like a boiler?

It's better to keep it running steadily. Turning it on and off makes it less efficient and more expensive to run.

Can I control my heating?

Yes, you can adjust your thermostat to find a comfortable temperature, just like before.

Does it make a lot of noise?

The outdoor unit makes a low hum when operating, but it shouldn't be loud or disruptive.

Can I dry clothes on the indoor unit?

No, keep the area clear to avoid blocking airflow or damaging the system.

What should I do if the system stops working?

Contact your housing provider. Don't try to fix or reset it yourself.

FAQs for EV Chargers

Can I charge any electric car with my charger?

Yes, most home chargers work with all modern EVs, using a standard plug type.

How long does it take to charge?

It depends on your car's battery size, but most will charge overnight.

Is it cheaper to charge at certain times?

Often yes. Many residents have off-peak or cheaper night-time tariffs. Check with your electricity supplier.

Can I use an extension lead?

No, always plug your car directly into the charger for safety.

Do I need to turn the charger off?

No, it switches on and off automatically when you plug in or remove your car.

What if there's a problem with the charger?

Report it to your housing provider or maintenance contact. Don't try to repair it yourself.

Is it safe in the rain?

Yes, all chargers are weatherproof and designed for outdoor use.

FAQs for Battery Storage

What does the battery do?

It stores extra solar energy your panels produce during the day, so you can use it later (like at night).

Will it make my bills cheaper?

Yes, it helps you use more of your own solar energy instead of buying from the grid.

Do I need to do anything to make it work?

No, it works automatically and charges or discharges when needed.

Is it safe?

Yes, batteries are tested to high safety standards and installed by qualified engineers.

Does it make any noise?

No, most systems are silent or nearly silent.

Can I store things on or near it?

No, keep the area around the battery clear for ventilation and safety.

What if it shows a fault or warning light?

Report it immediately to your housing provider or maintenance team.

Thank You.

CARBON3

PHONE:

0300 303 5688

WEBSITE:

CARBON3.CO.UK

EMAIL:

INFO@CARBON3.CO.UK

CARBON 3