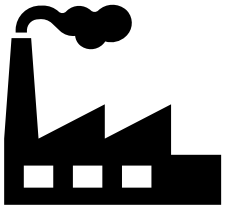


LoCASE Case Studies

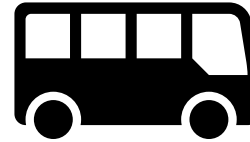
By Sector



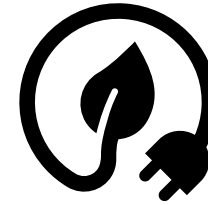
**MANUFACTURING
/ PRODUCTION**



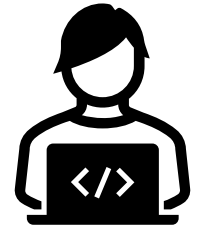
**CONSTRUCTION /
MAINTENANCE**



**TRANSPORT
/ MOBILITY**



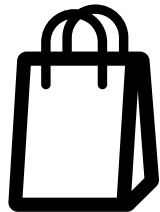
ENERGY



COMMS, IT



**HEALTHCARE /
SOCIAL CARE**



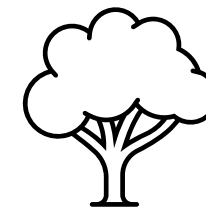
RETAIL



HOSPITALITY

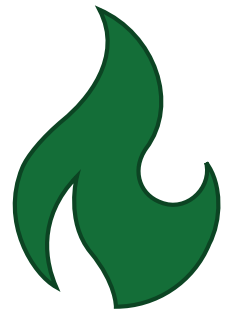


SERVICES



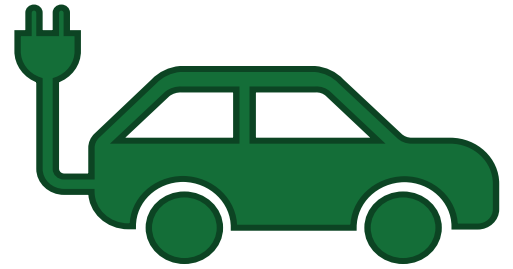
OUTDOORS

Greening Grants by project type



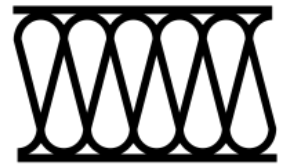
HEATING

Boiler upgrade, ASHP,
smart control...



VEHICLES

2nd hand EV, e-cargo bikes
...



INSULATION

Double glazing,
Insulation, thermal films...



LIGHTING

LED upgrade, PIR
switches, master switch...



EQUIPMENT

Replacement w/ 5%CO2e
saving...



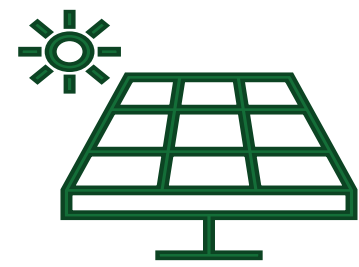
WASTE

Recycling, waste
processing equipment ...



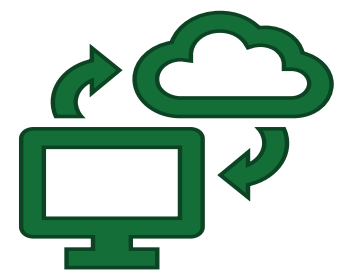
COOLING

Air con, Air
circulation system...



ELECTRICITY GENERATION

Solar PV, wind...



IT

Move to Cloud
...

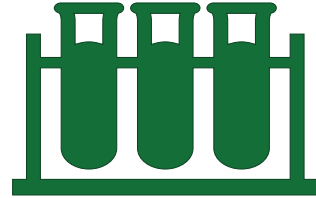
Business Development Grants by project type



SPECIALIST SKILLS

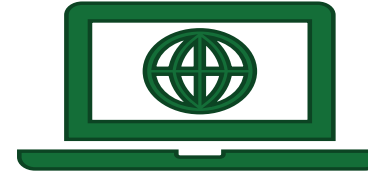
Academics, consultants

...



RESEARCH

Research, labs /
facilities hire...



WEB/MARKETING

Advertising, marketing
Website development



IT/SOFTWARE

Software, IT systems



EQUIPMENT

Machinery, ...



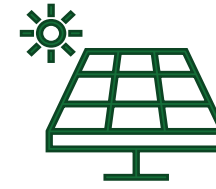
ACCREDITATION,

B-Corp certification...

By D&B



Solar panels and batteries for an IT Support company



SOLAR PANELS
& BATTERIES



COMMS, IT

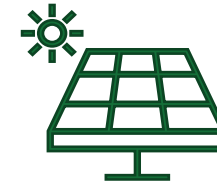
Tandridge
District Council

The business is a computer servicing and IT support firm based in the Tandridge District. It was the 1st project funded by LoCASE in Surrey. Their power usage was high and they researched renewable energies to reduce their reliance on the grid.

- The business chose solar panels and received funding from LoCASE to install 12 x 335w Solar PV Modules and install a new Inverter to boost their PV generated power to 6Kwh.
- The excess power is to be used to charge a TESLA Powerwall 2 battery system with the backup gateway. This will provide the business with Green Power for longer.
- The company also looked to switch energy provider to a green electricity contract.
- **The project saved 1.15 tCO2e and pre energy prices increases the business had estimated they would save £570 per year on electricity.**

LOCASE
LOW CARBON
ACROSS THE
SOUTH AND EAST

Solar panels and batteries for vineyard hotel



SOLAR PANELS
& BATTERIES

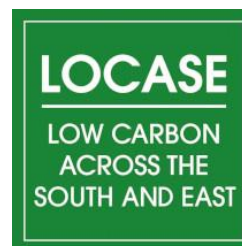


HOSPITALITY

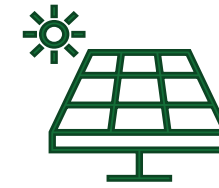


This SME is a hotel and is located in a beautiful vineyard in Surrey. It is a 1 or 2 night destination and is keen to achieve carbon neutral status. The hotel currently utilises energy from 17kW of solar panels that is stored in 15kW of Tesla batteries for use throughout the building. They have found that more overnight visitors are now dining at the restaurant, but the hotel alone is currently utilising the current solar power capacity, whilst the batteries operate at 50% capacity.

- This project part funded by LoCASE supported the installation of an additional 19.8kWp PV generating system – 60 panels, more than doubling the current system, thereby doubling the energy generation and fully utilising the battery capacity.
- **The project saved 3.54 tCO₂e and is helping fulfil the hotel sustainability and working towards its ambition to operate at Net Zero Carbon.**



Solar panels for an Automotive Centre



SOLAR PANELS

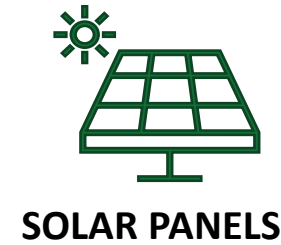


AUTOMOTIVE

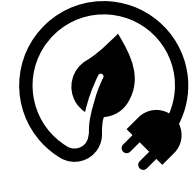
This Automotive High Performance Centre offers a full range of specialist services to help their customers derive the most from their Caterham ownership for road, track or race, including simulator-based driver development. The SME's workshop had already undergone some significant building works implementing energy saving measures with new insulated roof, double glazing throughout, LED motion-controlled lighting with light harvesting, rainwater harvesting, heating with zonal controls and a 12kWp solar panel array, installed in March 2017, generating just over 32MWh of electricity, equivalent to saving 8,300kg of CO₂, since then.

- The SME applied to LoCASE for funding to enable them to purchase and install an additional 33Wkp of solar PV array which will significantly reduce imported power from the grid and enable cost effective replacement of gas heating and use of battery storage. The key objective of the project was to reduce the import of energy starting with electricity; the un-utilised surplus will be used to provide EV charging, replace gas heating and also make the use of battery storage for later use.
- **The project saved 3.47tCO₂e, with an estimated £4,800 saved annually on energy bills, safeguarding 9 jobs and supporting the apprentice programme & recruitment of 2 new apprentice.**

Helping an Electrical EV specialist towards Solar Panel installation & accreditation



SOLAR PANELS



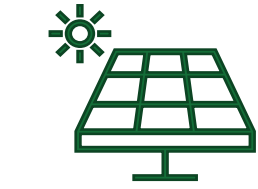
EV CHARGING
POINT INSTALLERS



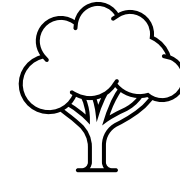
This SME is an electrical business specialising in installation of EV chargers for service stations & retail, commercial & leisure workplace and residential. The company wanted to reduce their carbon footprint further through the installation of Solar PV at their offices. They had commissioned a Sustainability Report with carbon footprint assessment and is committed to be carbon neutral by 2028. The SME had already addressed their biggest emissions by purchasing a Full Electric Vehicle.

- LoCASE was able to support the purchase of solar panels along with their MCS accreditation which will enable them to offer full energy saving installations to customers – solar panel and EV charging points. The applicant installed the solar panels themselves to achieve the accreditation but this not funded by LoCASE.
- The SME also upgraded tired workwear with new branded, recycled fabric alternatives so that staff could join on the road to neutrality and raise the company profile.
- **The project saved 0.92 tCO₂e and obtaining the PV solar accreditation will allow this SME to be more competitive, generating more revenue**

Helping Scouts save on energy costs with Solar Panel installation



SOLAR PANELS



SCOUTS



This Scout Group built a new purpose-built energy efficient HQ, with double and triple glazing, extensive insulation, air source heat pump under floor heating as well as LED low energy lighting with PIR control and high efficiency appliances. The building is used every week day evening during term times, some weekend mornings and at other ad hoc times for camps or events.

- When the building was constructed there were insufficient funds to install solar panels. They applied to LoCASE for funding to make the building as self-sufficient as possible by installing 28 solar PV panels and battery storage. This will enable the building to be supplied by renewable energy most of the time and reduce greenhouse gas emissions. This will also assist the Group to reduce running costs at this very unpredictable time in the energy supply market.
- **The project saved 2.58 tCO₂e**

Heating upgrade for a community pub



HEATING



PUB

Waverley
BOROUGH COUNCIL

A 400 year old pub which also acts as the Community hub has applied for this project as part of an ongoing investment plan to underpin the long term sustainability of the business. The existing building had been upgraded in the area of power and water consumption through the introduction of 3phase power and water saving technologies but the primary Hot water management systems for both heating and hot water had been evolved rather than planned and the result was a very inefficient system.

- LoCASE funding was applied for to replace the outmoded direct hot water circulation from oil fired boiler with a heat buffer store capable of accepting heat from multiple sources including, boiler, heat recovery and heat pumps and any future technologies and will facilitate efficient management and re-utilisation of energy in support of the business operation. The SME also added a sustainable biomass boiler which will still have a low CO₂e impact.
- The improvement in basic circulatory infrastructure will facilitate investment in the conversion of underutilised first floor accommodation into a quality B&B accommodation facility which will provide a much needed stream of income to guarantee survival of the community Pub.
- **The project saved 20.15 tCO₂e and the business had estimated the impact in income generation of an extra £15k to £25k**

Lighting & Heating upgrade for managed offices



LIGHTING



HEATING



MANAGED
OFFICES



The business manages offices building consisting of 20 offices with 24 hour access. There are currently 15 small businesses using the buildings.

- The project part funded by LoCASE helped upgrade all 269 light fixtures to LED, which would represent a considerable energy saving, reducing their carbon emissions and enabling the SME to be more cost effective.
- To further the efficiency of the building, the SME applied to LoCASE to install a hydrogen ready new boiler and replace air conditioning units, which were over twenty years old with a more energy efficient system. By doing all the above energy consumption was estimated to be cut by 40%.
- **The project saved 4.37 tCO₂e and payback on the c.£32k project is estimated at 2.64 years.**

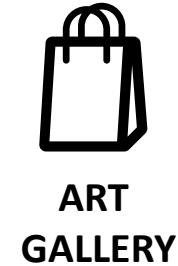
Helping Managed Offices save on Energy costs with a LED lighting upgrade



This SME runs leased managed offices in a large building and were looking to reduce their electricity bills

- The applicant applied to LoCASE for funding to replace 413 high carbon lamps with LED lighting.
- **The project saved 7.57tCO₂e and pre energy prices increases it was estimated they would save £5,208 per year on electricity**

Helping an Art Gallery save on energy costs with LED lighting upgrade



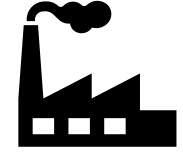
This charity specialises in the curation, promotion and sales of contemporary arts and craft by established and emerging artists and makers, working on painting, print, ceramics, jewellery, textiles, glass and wood. Located in a Grade 2 listed building, they had drafted a new Environmental Policy to ensure they were as energy efficient as possible within their very aged building.

- A LoCASE grant supported a change from the current high energy halogen bulbs to LED bulbs. The charity has 25 lit display cabinets that are constantly lit when the gallery is open, from Tuesdays to Saturdays. The new LED lights are brighter and a more appropriate lighting for the crafts on display which the charity foresaw generating more sales.
- **The project saved 1tCO2e and pre energy prices increases it was estimated they would save £377 per year on electricity and generate an estimated £2,000 in additional sales.**

Manufacturing engineering SME reduces carbon footprint with LED upgrade



LIGHTING



MANUFACTURING
/ ENGINEERING



This SME is an engineering company offering metal machining services, toolmaking and injection moulding to a wide range of industries, including Aerospace, Defence, Oil & Gas, Marine and Automotive.

- Determined to reduce their carbon footprint and having had a carbon footprint analysis done, the business also welcomed the benefit of cutting their energy bills by replacing their inefficient fluorescent lighting with LED lighting which were funded by LoCASE.
- **The project saved 6.54tCO₂e and pre energy prices increases it was estimated they would save £2,749 per year on electricity**

Helping a takeaway coffee van upgrade from a diesel generator



BATTERY

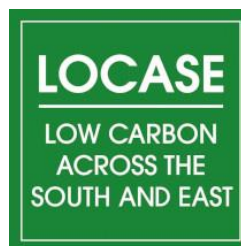


COFFEE
TAKEAWAY



This mobile coffee van sells coffee from locations such as office parks, industrial estates and events. Operating the daily business requires an independent power supply for the built in commercial coffee machine and other associated electric devices in the van. Currently, these devices are powered via a built-in commercial diesel generator.

- The SME applied for LoCASE funding to convert the existing coffee van from a diesel generator, to battery technology. By doing this, improving operation time, achieving lower maintenance costs, lower fuel usage and eliminating both noise and diesel generator air pollution whilst improving business opportunities.
- **The project saved 3.12tCO₂e, cutting air pollution and noise pollution against previous diesel generator with a Return on Investment within 5 years.**



Helping a Fish & Chip shop upgrade to energy efficient fridge freezers



FRIDGE
FREEZERS



FISH&CHIPS
SHOP



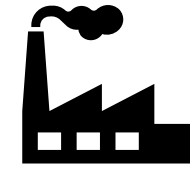
This traditional fish and chip shop sells 300lbs of fish per week and an average of 1 ton of potatoes per week. They also sell sausages, pies and cold drinks. The equipment in the shop was old and not energy efficient. The SME needed new equipment to meet the continuous demand for 24-hour refrigeration of its essential supplies on site, whilst at the same time minimising the energy consumption and carbon emissions.

- LoCASE funding is enabling the business to replace the existing fridge, freezer and chest freezer and also install a CFC free Fish Keeper refrigeration unit, lowering their energy bills whilst reducing the business' carbon emissions.
- **The project saved 0.73tCO₂e. The annual cost saving is £968.09 on the SME's energy bills, with a return on investment in 3.59 years.**

Enabling manufacturing of new products from recycling waste



EQUIPMENT

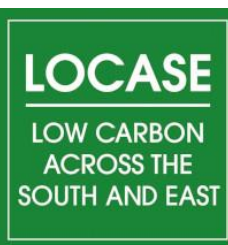


EVENT FLOORING
MANUFACTURER



This SME designs and produces flooring tiles for the event industry by recycling polypropylene plastic into modular low-profile plastic tiles with cable management and structural support, as a sustainable alternative to carpet & carpet tape. Some of the range is made from Ocean recycled plastic.

- The SME applied to LoCASE for funding to purchase a filament extruder and a 3D printer, enabling the business to reuse the waste product from the SME's existing plastics granulator in the form of polypropylene dust, and for this waste to be used to make 3D printed one off, bespoke items and custom designs for their clients, as well as scaled down prototypes of their stackable chairs, which the SME had patented. The grant also supported the insulation of the area around the machines and supply of heaters to maintain optimum temperature for the most efficient use of the new machines
- The SME has also been in discussion with the local secondary school to facilitate an Art & DT competition for under 16s to learn about plastics, recycling and circular economy.
- **As well as create extra revenue for their business, the project will enable the SME to educate and inspire the younger generation.**



Helping a dry cleaning business cut harmful chemical use



WASHER & DRYER



DRY CLEANING



This is a family laundry and dry-cleaning company with private and commercial customers. It has been operating for 30 years. The 3 washing machines are on for 6-8 hours a day, 6 days a week using c.1,500l of water per day. The business has reduced plastic use by providing reusable bags and using compostable polythene to wrap clean clothes, for the few customers who have forgotten their own bag. They have also switched all their shop lighting to LEDs.

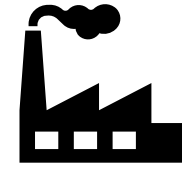
- The project is to replace the 17-year-old dry-cleaning machine and a 20-year-old washer with a more energy efficient and economical model. This enabled 70% - 80% of the current dry-cleaning business to use the new machine, cutting the amount of PERC hazardous solvent being used as the new model uses biodegradable detergent. The machine weighs each load and only uses the water, detergent and energy it needs to process the weight of the load, cutting wastage.
- The project enabled the SME to provide a more environmentally sound option, creating a more sustainable, economical business and a much-improved working environment for the staff. It will save 454% electricity and 377% water. In addition, it will enable them to contribute to reducing the carbon footprint of their local community and other companies they work with.
- **Saving £4212 on energy and 3.04tCO₂e annually**



Enabling product testing & life cycle mapping to low carbon



EQUIPMENT



ARTIFICIAL GREEN
WALL MANUFACTURER



This company makes artificial green wall panels with ultra-realistic, varied, lush foliage to transform urban environments where real vegetation would never grow or thrive and allow water saving. Panels are manually assembled as a grid and can be cut to size to fit any space. Around 18,000 panels are sold per annum.

They were keen to improve their carbon footprint and plastic sustainability. Although a deposit scheme is already in place, where its clients can return the panels for re-use in-house, the main aim is to recycle 100% of the post-consumer plastic waste to be re-used as brand-new products. This will also serve to reduce the carbon footprint of the product life cycle using Life Cycle Analysis and sourcing for Bio-Polyethylene in the product instead of regular, fossil-based Polyethylene.

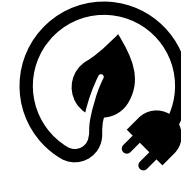
The business has its own R&D facility and conducts research into the formulation of bio-polymers with the aim of making the product more environmentally friendly, sustainable and recyclable whilst also maintaining the UV, fire resistance and mechanical properties of the product.

- LoCASE was able to support the acquisition of a Zone Cleaner machine to enable accelerated UV-ageing testing on their bioplastic samples in 30 minutes vs. 4 months, and a software to map out the entire life cycle from supply chain, logistics, production, to post-consumer use.
- **The Project will save 114.48 tCO₂e and creation of 2 jobs**

Helping a greening business with Product Development



CERTIFICATION



MOTION SENSOR
ENGINEERING



The SME designs and manufactures motion sensors and keypads which connect to smart home control systems to automate lighting, heating and shading to ensure the comfort of the resident while also significantly reducing energy usage. They export to 40 countries around the world, improving the energy efficiency of thousands of homes from London to Australia.

Research and development is mainly undertaken in-house with third party consultants used to support the business with specialist skills and equipment when required.

- The business applied for funding to assist with the development of 5 new energy saving products (low profile variants of current products), to enable access to new markets, increase revenue and further reduce energy used by its customers.
- **The business estimates that revenue will increase by £750,000 per annum. The project also help safeguard 2 jobs.**

LOCASE
LOW CARBON
ACROSS THE
SOUTH AND EAST

Helping a sole trader micro business get an EV car



ELECTRIC VEHICLE

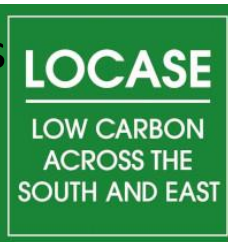


RETAIL



This sole trader business designs and creates its own fishing the Lure market products for predatory fish such as trout, pike, perch, salmon... The products are fabricated and imported from China and Kenya and then sold to customers via ecommerce sites and its own website. The business was using an old diesel estate car, which emits high levels of air pollution and CO₂. The vehicle is essential to supporting the business and is for daily runs to the post office to drop off e-commerce packages, visiting retailers to deliver replenishment stocks, attendance to fishing exhibitions and shows as well as product testing trips to lakes, ... across the country and at competitions.

- The business applied to LoCASE for part funding the purchase of a second hand electric powered estate car to replace the diesel vehicle. The project was supported as EV will reduce emissions in terms of CO₂, particulate matter, NO_x and Hydrocarbons substantially, and contribute towards improving air, offering reduced noise levels and requiring less servicing and maintenance compared to the older vehicle, thereby, providing cost savings to the business. The SME intends to charge the EV using renewable electricity sources whenever possible.
- **The Project will save 0.52t CO₂e**



Helping a Vending Machine SME travel in Central London with electric vans



ELECTRIC VEHICLE



COFFEE VENDING MACHINES



This family run business provides customers in London and the Southeast with coffee machines, water boilers, vending machines and water coolers. The business also supplies associated consumables and refills for the machines as well as providing installation, maintenance and cleaning services.

The business takes its environmental responsibilities seriously with initiatives like coffee grounds recycling, bring your own (BYO) mug instead of disposable cups (approximately 70% of their machines are now programmed for BYO), reducing the use of plastics i.e. wooden stirrers, biodegradable or recyclable plastic cups. The SME is aiming to remove plastic cutlery from its offering in the near future too. Delivery patterns for their vans have been reviewed and changed to maximise van loads and reduce unnecessary mileage.

- The SME has two diesel vans: one for deliveries and the other for service and installation. The delivery van is used to replenish tea, coffee and associated consumables at customer premises. This van is in use 5 days a week, 52 weeks of the year and covers approximately 15,000 miles per annum. The

The LoCASE funding helped the SME purchase a second hand Electric van and reduce its CO₂.

The Project will save 0.62t CO₂e

Helping a pharmacy with an Electric Vehicle for local deliveries



ELECTRIC VEHICLE



PHARMACY



This SME runs two pharmacy stores and seek LoCASE funding to enable them to replace their diesel van with a fully electric second hand van to run deliveries between the stores and to customers – as these services have become even more popular since COVID. The current annual milage on their diesel van was over 25,000 miles.

- Since research has shown that electric vehicles are better for the environment, as they emit fewer greenhouse gases and air pollutants than petrol or diesel vehicles, taking into account their production and electricity generation to keep them running. EVs also contribute towards improving air quality in towns and cities. With no tailpipe, pure electric cars produce no carbon dioxide emissions when driving, as well as reducing the noise level, resulting in better neighbour relationships for the delivery driver as they carry out emergency deliveries during early morning and late evenings. There business will also enjoy cost reductions, as EVs require less maintenance and are cheaper to run compared to diesel vans.
- **The project will be saving 4.25tCO₂e annually and result in quieter deliveries and better environment for its customers and neighbours, as well as safeguarding 2 jobs.**

Helping a QS drive decarbonisation of the construction industry



SOFTWARE



QS



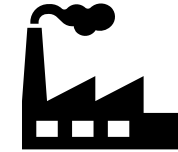
This start-up SME is a chartered environmentalist, with 15 years quantity surveying experience in addition to several years working in the building industry. The SME operates in the construction and property industry to provide carbon saving reports and calculations to clients, helping them find the best suited sustainable solutions to achieve net zero and Passivhaus compliance.

- The LoCASE grant is to invest in new carbon calculating software required to carry out Whole Lifecycle Carbon Assessments and Circular Economy statements for new planning applications to local authorities. The specialist software is accredited by the Royal Institution of Chartered Surveyors and conforms to BS EN 15978.
- **The project will help broaden their client base and increase carbon savings in the construction and property sector.**

Helping engineering firm with software



SERVER &
SOFTWARE



ENGINEERING



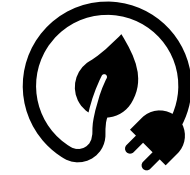
This engineering company works in the Aerospace, Defence, Gas Turbines, Marine, Nuclear, Renewables, Science and Sport industries, developing greener combustor for aircrafts, lighter hydrogen fuel cells, electric boats.

- LoCASE funding helped support the improvement of their network, with the introduction of better servers, switches, cables, and software to realise a reduction in CO₂e emissions. This is in aim to be more competitive and reduce their carbon footprint as they progress towards net-zero.
- This will be achieved by improving both work from home and in-office productivity, with the enhanced access and processing speeds of a new network, reducing staff requirement to commute (and their requirement to heat and power the office); by becoming more competitive, promoting business growth and safeguarding UK-based engineering jobs; by facilitating better WFH they become more resilient, offer their staff more flexibility & reduce both company and employees' carbon footprints.
- **The project saved 4.41 tCO₂e and could facilitate a Gross Value Add of up to £122,850**

Supporting an innovation tech company develop its market with a website and marketing



WEBSITE



BATTERY
REVIVING



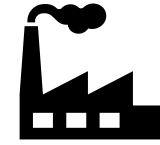
After 10 years of research, this start up innovation tech business has developed a process of regenerating spent Lead-Acid batteries and lithium-ion batteries, without the requirement for disassembly, with 90% of used batteries renewed and 80% of these batteries achieving the requirements of automobile manufacturers' standards for new batteries. The innovative process offers extremely low emission and pollution risks to the environment compared with the current dismantling and recycling process for spent batteries as well as much lower costs per battery. This circular economy business enables to reuse lead when lead reserves across the world are declining rapidly and the CO2 emitted in the process of extracting lead and the manufacture of the batteries is very high. It also avoid issues related to irresponsible abandonment of spent batteries presenting environmental, pollutant and human health hazards from the heavy metals, toxic chemicals and waste liquid components. The SME has been regenerating c. 30 waste batteries per day and selling these on to personal users, small-midsized garages and large car parts retailers.

- To scale up the service to a much wider market, substantially increasing the number of batteries being regenerated and maximising the huge potential of this business, the SME got LoCASE funding for a new website and marketing.
- **The project will help to support 3 existing jobs and create 2 additional jobs in year 1. The business is forecasting the employment of up to 30 people by the end of year 2 if business expansion goes according to plan.**

Helping a green refrigeration SME access London maintenance jobs with e cargo bikes



E CARGO BIKES



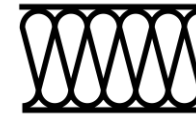
REFRIGERATION
UNITS

Runnymede
BOROUGH COUNCIL 

This innovative SME supply and install heat pumps with natural refrigerant r744/Co2 refrigeration units. These are modified to be powered by Co2, using the waste of other industries to power fridges and cold rooms. The system can also reuse the heat generated by the units through a heat exchanger, allowing it to produce heating and or hot water with 2 kg of Co2. Their systems are used in take away food chains for their fridges, cool rooms and hot water or floor heating.

- The SME applied for a LoCASE grant to assist their project to use 2 e-cargo bikes to access maintenance jobs in London in ULEZ zone, instead of using their diesel van – using a vehicle which matched their products green credentials, saved money on fuel and ULEZ costs and fitted to their client expectations of a greener company.
- **The project saved 8.76tCO2e annually and save the business £6231 per year, whilst enabling access to more businesses with 2 vehicles**

Helping a framing and art gallery SME cut energy bills with better insulation



INSULATION
/GLAZING



RETAIL



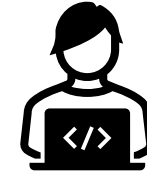
This small art gallery operates from an old (approx. 100-year-old) building. The SME looked for LoCASE funding to improve the energy efficiency of the building and make the premises a better environment for the staff to work in. A warmer retail unit for customers to linger and view the artwork, resulting in higher sales.

- The project entailed new double-glazed windows to the upper gallery, to replace the original sash single glazed windows, a new shop front and entrance door to replace the draughty existing one.
- The SME is also looking to install some insulation themselves.
- **The project saved 1.07tCO₂e and is expected to generate higher sales from a more auspicious environment**

Helping a successful IT company become a BCorp



CERTIFICATION



IT

Reigate & Banstead
BOROUGH COUNCIL
Banstead | Horley | Redhill | Reigate

The SME is a certified Cisco partner whose main focus is to help companies reduce the temperature of server rooms to a minimum ongoing level, thereby delivering significant carbon savings. They also develop physical networks for companies and offsets shipping costs with carbon credits and ensures that redundant equipment is professionally recycled.

- The SME subscribes to the B Corp ethos of using business as a force for good and believes that by taking advantage of faster growth that's typical of a B Corp it will be able to offer better quality jobs, and improve business survival rates amongst its client base and wants to become the UK's first Cisco Partner with a B Corp certification and will use LoCASE funding to support the costs of certified consultants who will help develop processes necessary for achieving B Corp accreditation.

