

Targeted Market Development

Product Booklet
2010/11

CO2Sense is offering Yorkshire and Humber businesses the chance to trial environmental products and services that can substantially reduce environmental impacts and costs.

Through this project you can trial green products and services produced by Yorkshire businesses.

By taking part in this project you can reduce your costs and environmental impacts and help to create a market for local green products and services



The number of trials we can undertake are limited. To make sure you don't miss out call or email the CO2Sense product contact now.

How we'll help you:

1. Monitor how well the products and services work
2. Help you put together the case for roll-out of products or services across your business
3. Help you understand finance opportunities to reduce your impacts

The main conditions of trials are:

1. If the trials are successful - prove to be cost effective, and provides environmental benefits - you will make a commitment to buy the product or service in the future.
2. Allow CO2Sense access to all monitoring data (this data will remain confidential unless agreed to be publically release by both CO2Sense and the client). This will help demonstrate the benefits to other businesses.



Crystal Clear Window Works

Free trials

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Fogged windows

Condensation between the panes is a common problem for double glazed windows.

Traditionally the only solution is to replace the glass sealed unit.

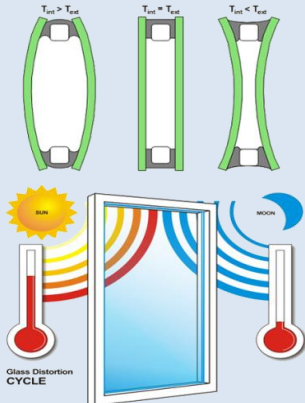
Crystal Clear repair your failed windows restoring clarity and thermal efficiency

40% cost saving versus replacement

• **zero glass waste to landfill**

• **44kg CO₂ saved for each repair**

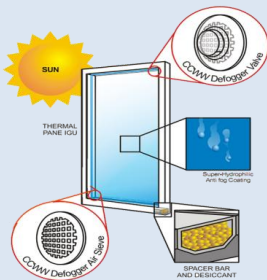
• **20 year guarantee on all repairs**



Why

Fogging is caused by changes in temperature that puts pressure on the sealed unit. During the day the unit expands and at night contracts.

Over time this process breaks the windows seal allowing water vapour to enter and fogging the window.



The Service

Crystal Clear repair process for fogged windows:

- Piercing the top and bottom of the unit on one side
- Flush with a super-hydrophilic anti-fog coating to prevent further condensation
- Plug the holes with valve/air sieve



The Result

After a short drying out period, the antifog coating will prevent the unit from fogging in the future restoring its clarity.

The Crystal Clear service will reduce window replacement costs, extend the life of windows, and divert waste from landfill.



PAS 100 Compost

50% funded trials

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The product

PAS 100 is the certification scheme developed by the Association for Organics Recycling (AFOR).

Compliance with the protocol, and PAS 100 certification, means compost is not classed as waste and users don't have to go through environmental permitting.

84kg of CO₂ is saved for every tonne of compost used.

• **Potential cost savings of £30-£90 per acre.**

• **Compost improves soil structure and water retention**



The benefits

Using compost helps farmers to improve the structure and quality of soil, and has been shown to increase yields.

A trial carried out by WRAP, for example, showed that compost use could increase potato yield by an average of 7%.



The Result

Annual cost savings of using compost instead of inorganic fertiliser range from £30 up to £90 per acre.

Compost promotes biodiversity by reducing the risk of nitrate run-off which can be harmful to wildlife.

Compost increases crop yield



Warmcoat Energy Saving Paint

Free trials

CO2Sense contact

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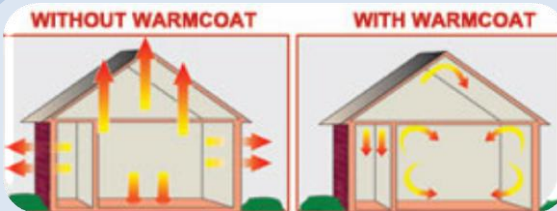
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Warmcoat can be used as your final coat of paint or as a basecoat and is available in a range of colours.

It's insulating properties create a unique thermal barrier and reduce heat loss. Two coats of Warmcoat are recommended for maximum thermal efficiency.



How Does Warmcoat Work?

Warmcoat is made up of a unique formulation containing NanoCNB structures. This allows the creation of an effective thermal barrier once the paint has dried.

When walls and ceilings are coated with Warmcoat, the surfaces lose the ability to absorb heat from the room. The heat is reflected back into the room and away from the surface due to the thermal barrier that has been formed. So rooms stay warmer, and warmer for longer.

Keep rooms warmer for longer

•
Reduce household CO₂ emissions by up to 240kg

•
Households save £20 to £90 per year



The Benefits

Warmcoat provides a U-value improvement of 0.14 W/m²K, and has been independently tested across the world to UK, EU and ASTM standards.



Warmcoat Stops Condensation

Condensation occurs when the warm air in a room is attracted to a cool wall, causing water droplets to form on the surface and condensation to build up.

Warmcoat's thermal barrier keeps the cold wall surface and the warmer air apart. Therefore the production of water droplets and condensation is dramatically reduced if not totally eliminated.



PFF, rPET packaging

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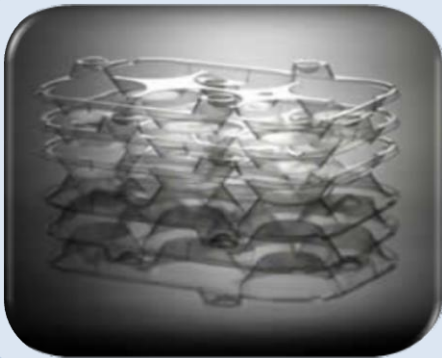
Free trials



Food grade packaging

PFF is pioneering the manufacture of food-grade rPET packaging from recycled post consumer waste.

These products are designed to meet food standards legislation and stringent visual, hygiene and environmental demands of leading retailers.



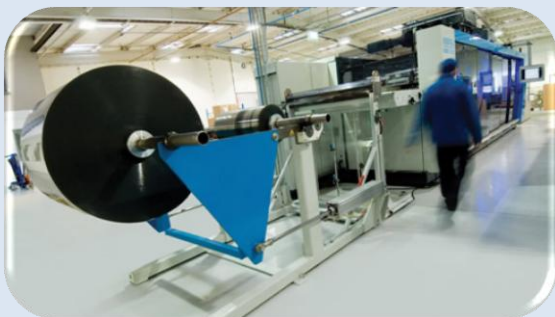
rPET recycled content

The 90% recycled content plastic used to manufacture rPET100 is primarily made from soft drinks bottles. It is rPET material which contains 50% post-consumer and 40% post-process waste with a 10% virgin PET capping.

**90% recycled
PET plastic
packaging**

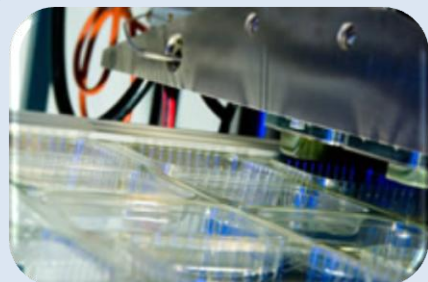
•
**Food-grade
quality**

•
**Lightweight
whilst
maintaining
protective
strength**



Manufacturing process

The PFF rPET100 single polymer packaging system is created using rPET sheet with up 90% recycled content which is then thermoformed into packaging to suit customer requirements. Sandwiching the super-cleaned recycled PET within outer layers of virgin polymer ensures no contamination risk and secures full food-grade status.



Light-weight packaging

PFF have invested in an innovative line capable of reducing the weight of standard rPET packaging whilst maintaining the products properties. This line also allows PFF to create cushioned packaging that can compete with expanded polystyrene (EPS). This is less energy intensive and is able to use recycled material unlike its EPS alternatives.



Saver-siphon

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Free trials



Saver-siphon

A fully interruptible WC siphon which allows the user to flush only the water that is needed, preventing waste. 90% of office water is used for toilet flushing. The Saver-siphon saves half the average water used cutting water bills between 20-40% .



How it works

A siphon stops flushing when air is allowed to enter it. The Saver-siphon introduces an air valve which is closed when the flush handle is down (to allow flushing), and open when the flush handle is up (flushing stopped).

**Saves half
the flushing
water**

•
**20-40%
saved on
water bills**

•
**Will outlast
any other
siphon on the
market**



Everlasting diaphragm

The saver-siphon uses a new type of diaphragm (the flap that lifts the water to start the flush). Existing plastic sheet systems can tear meaning the siphon can fail. The saver-siphon has nothing that can tear.



Also available as a retrofit - Interflush

The system is also available as a retrofit to existing siphon systems. The Interflush is a DIY kit that fits directly on top of your WC siphon. Once fitted it has exactly the same impact as the Saver-siphon without the need to invest in a completely new siphon system.



Instant Pot Hole Repair

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Free trial batches

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The product

An environmentally friendly and cost effective alternative to tarmac for repairing roads, footpaths and car parks.

The product is made from 90% recycled materials, which cold set in 5-30 minutes depending on temperature and humidity when mixed with an organic compound.

Made from recycled materials



Cold-sets in minutes



Eight times more durable than traditional tarmac



Durability

On a like for like basis it is approximately 8 times more durable and stronger than traditional tarmac and therefore repairs will have a longer life expectancy which also provides environmental benefits. .



Environmental benefits

Unlike most tarmac processes no volatiles are released during manufacture or laying. It has significant benefits in terms CO2 savings both as a raw material, and in terms of transport costs because manufacturing can be undertaken local to the point of use.



LEAP Panel

Crompton Mouldings

Free trials

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LEAP panels

Layered Engineering Active Polymer (LEAP) panels are flat panels made from recycled materials that can be used for a variety of applications including temporary buildings. They are made with a skin from recycled plastics and a core made up of waste material such as, plasterboard and polypropylene based carpets.

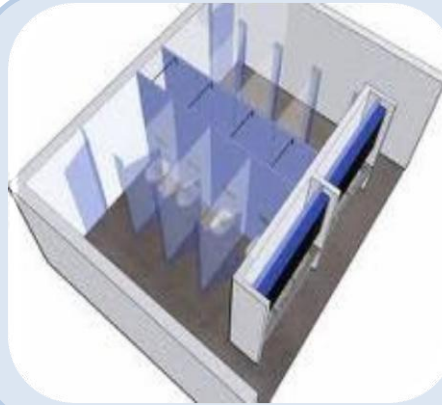
The panels are manufactured by Crompton Mouldings for 'added value' applications such as the Mediwall panel developed for Swift Horsman. The Mediwall panel is designed to provide the walls and floor for highly specified washrooms.

Made from recycled materials

•
Requires zero treatment

•
Permits pre-assembly offsite

•
Requires zero steel reinforcement



Product finish

The LEAP process produces, in one step, out of recycled materials, a finished product, with the required structural strength, surface finish, fire retarding, and noise attenuation characteristics



Added benefits

Conventional materials may require three or four additional treatments at different times as well as requiring significant amounts of steel reinforcement to obtain the required structural strength.

LEAP also permits outfitter to pre-assemble fitted out units offsite to minimise the use of on site labour for fitting out and finishing activities.



Smart Meters

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Try before you buy

Suitable for electricity spend over £2,500

• Monitor electricity use in real time

• Reduce and improve electricity use by up to 8%



What are Smart Meters

Secondary (sub) Smart Meters provide electricity consumer with a way of monitoring and measuring energy consumption.

This information can be used as part of an **energy management plan** reducing energy use by as much as 8%



Yew Tree Pub , Otley

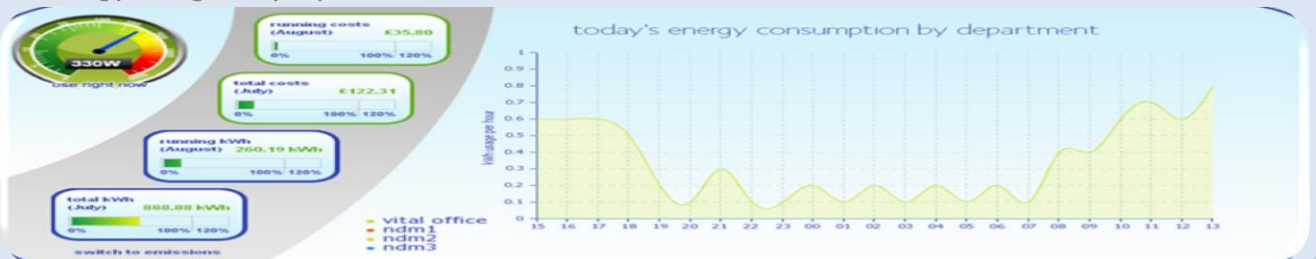
After Smart Meters were installed, the Yew Tree identified the following savings

- Smokers outdoor heater – reduced timer from 20 to 5 mins
- Super chilled lager costs 7p extra per pint in refrigeration, renegotiated price with brewery

Single or multiple meters?

sub meters can be deployed in appropriate areas of a building, such as at the main incoming supply, at the distribution panel and/or in specific areas of high energy consumption (air conditioning, production areas etc.)

Energy Usage Display



The Tadpole

Boost heating efficiency

Try before you buy

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A Clear Solutions for Heating Systems: A unique device which when fitted to your existing heating system removes the air from the heating water and achieves energy savings of over 25% in heating bills and eliminates the formation of magnetite's which causes corrosion and shortens the life of radiators, pumps, boilers, valves and make the system work inefficiently.

Benefits:

Savings of up to **29%** on heating bills

Tadpole is **easy to install** with only two connections.

Reduced energy consumption: heating or primary water operating with a Tadpole will become 10 to 12 degrees hotter, whilst using the same amount of energy.

Almost **silent running**: much of the noise made by a heating system is associated with the air in water

Will work with condensing, non-condensing, oil and gas boilers, including **combination boilers**, as well as all **types of heat pumps**.



How it works

As water enters the Tadpole it spins into a vortex.

In the middle of the vortex there is a low pressure zone which is sufficient to draw the dissolved air out of solution.

As the water reaches the outlet of the Tadpole the action of the vortex increases and the bubbles of air rise upwards and are released from the system through the air vent.

**10% ENERGY
SAVINGS
OR
A MONEY
BACK
GUARANTEE**



Powersol

Energy Saving Autoswitches

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Try before you buy

The PSX series can control virtually any mains appliance, in a way that ensures contentment to the user whilst ensuring energy is not wasted.

These tamper proof 'Autoswitches' turn off appliances via **timed**, **temperature** and **occupancy** control.

Benefits:

Tamper proof controls that can only be set through their unique USB programming port.

Minimal disruption in installation and require no maintenance

Puts the bill payer in **control**

Ideal for applications where the energy user is not **responsible** for the bill

Average saving of >15% for Gas Boilers and Electric wall heater applications

PSX105 The standard unit used to control everything from central heating to making sure that energy is not wasted whilst a room is unoccupied. The standard unit can turn a ring main off if too many devices are being used. The PSX105 will even detect high consumption devices such as plug in electric fires and turn them off.



PSX125 The fused spur unit designed for electric heaters / element water heaters a direct replacement for the existing fused spur. The world's first occupancy sensing heavy load control device.



PSX135 the standard unit with a 7-day timer built in. This version offers control of an office power supply. PCs, photocopiers etc left switched on? Use the 7-day timer to ensure equipment is automatically turned off. At the touch of a button you can reactive everything outside the preset times should you need to.



Industrial-scale biomass boiler

Lease opportunity

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With rising energy costs, woodfuel offers a sustainable, secure and cost competitive alternative to fossil fuels, helps to meet obligations such as the Carbon Reduction Commitment, and qualifies for payments under the forthcoming Renewable Heat Incentive.



Try out wood pellet heating at no capital cost thanks to the availability of the UK's first industrial-scale demonstration boiler, funded by CO2Sense Yorkshire.

Two key barriers to the uptake of wood burning boilers are the high capital cost combined with a lack of familiarity and experience with the technology. Organisations can lease the boiler, providing hands-on experience of and confidence in the technology.



The Offer

The 2MW boiler, available for lease for up to six months, has been built into a shipping container as a mobile unit, making it easy to install on site.

Organisations that the boiler is expected to suit include those with a high and steady heat demand such as hospitals, swimming pools, hotels with a laundry on site and certain industrial processes.

