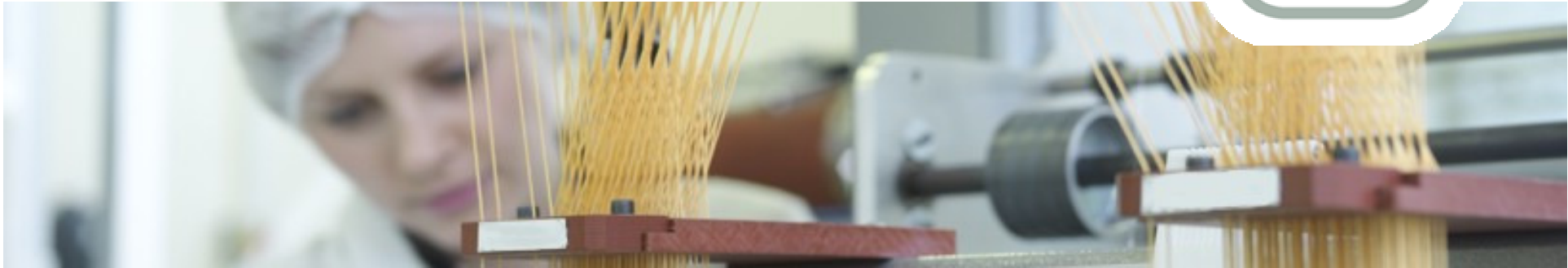


people.innovate.



# Xiros and the Environment

Our Environment Management System



## ISO 14001:2004 *Environmental management systems*

- The cost £ of registration – benefit to the company
- Resources to comply with the standard
- Due to nature of our business, we are already audited by BSI for ISO 9001 & ISO 13485, the FDA and Investors in People
- We maintain our own EMS:
- **SCOPE**
- This Manual describes the way in which Xiros plans and continually improves its environmental performance in ways appropriate to the company's scale and type of operation, in accordance with its published Environmental Policy.
- The scope of these activities will include:
  - business operations
  - the care of its grounds at Springfield House, Yeadon
  - staff transport (to the extent possible)
- It describes the procedures it has put in place to comply with ISO 14001:2004 *Environmental management systems – Requirements with guidance for use*, otherwise referred to in this document as the "International Standard".

people.innovate.

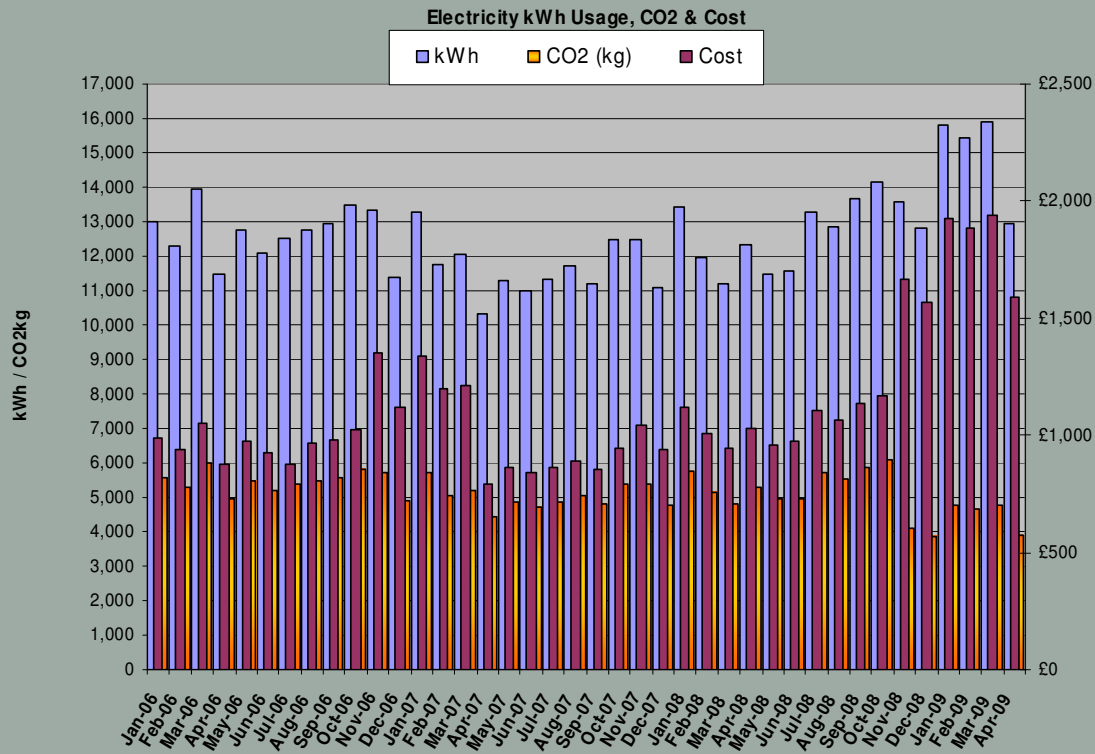


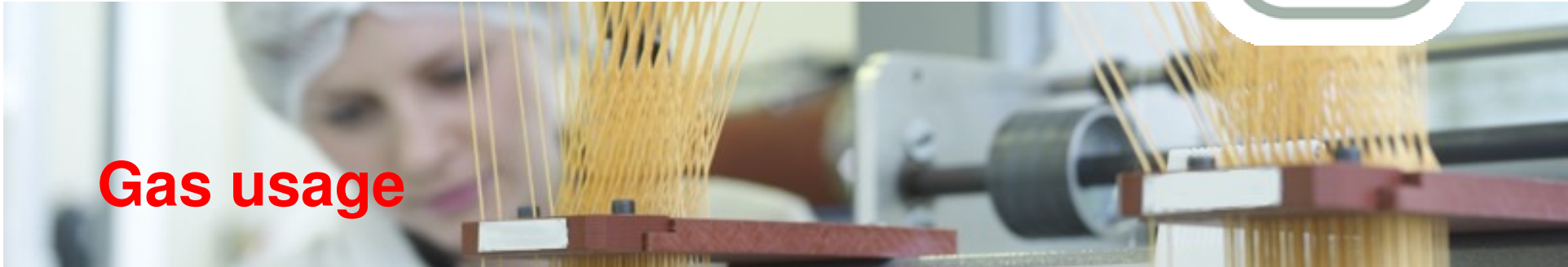
## Our EMS

- The implementation of our EMS is met by our Environment Team
- We report directly to the Board and are given targets by the Board
- Our EMS includes:
- Monitoring and/or measurement of usage of specified resources, such as:
  - waste and rejects
  - water usage
  - power usage
  - paper usage
  - materials for manufacture
  - materials for janitorial use
  - vehicle and other travel mileage
  - vehicle fuel consumption
  - freight and carrier mileage
- staff commuting issues
- company carbon footprint;

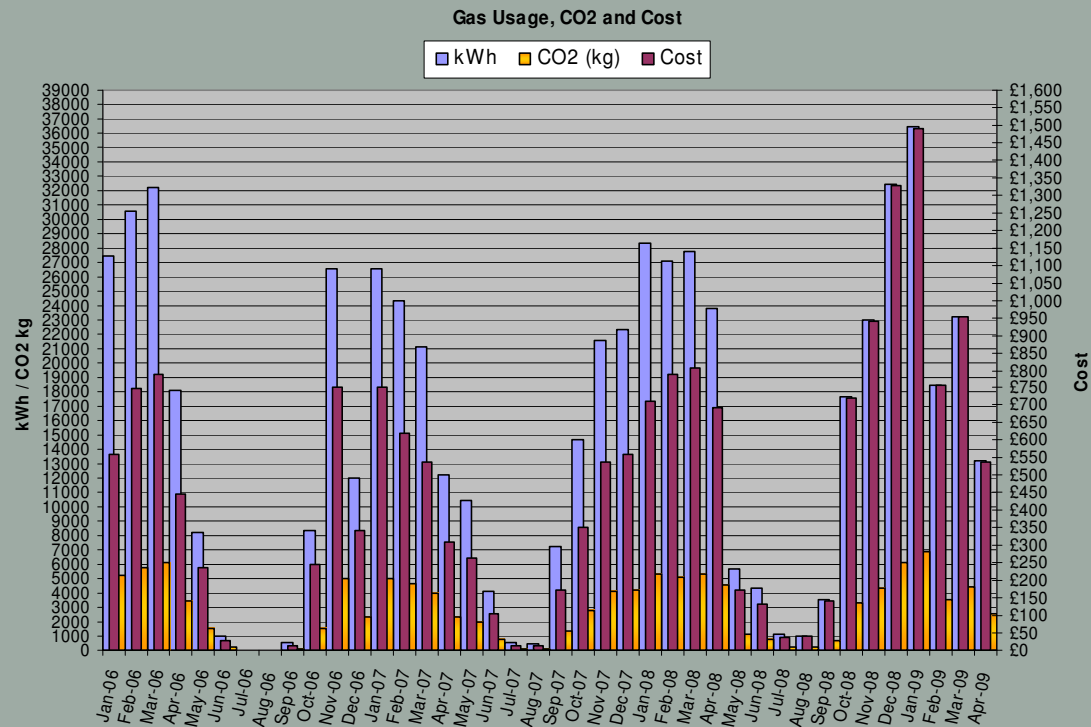


# Examples of how we do this: Electricity usage

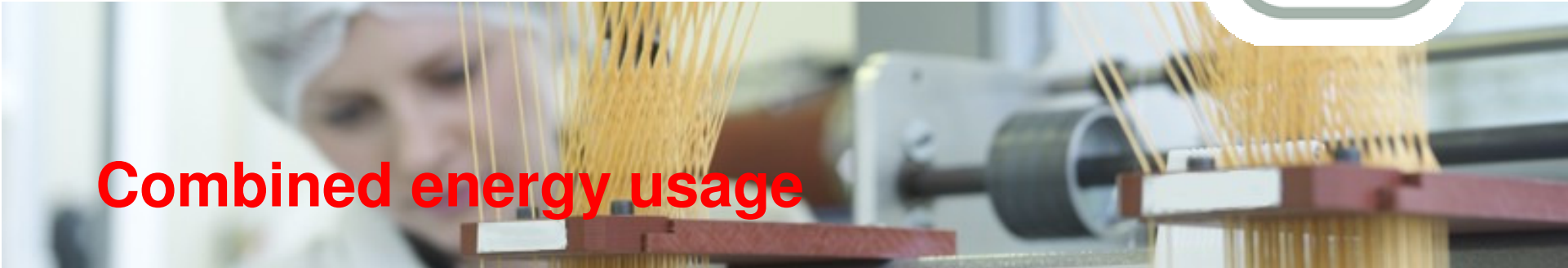




# Gas usage

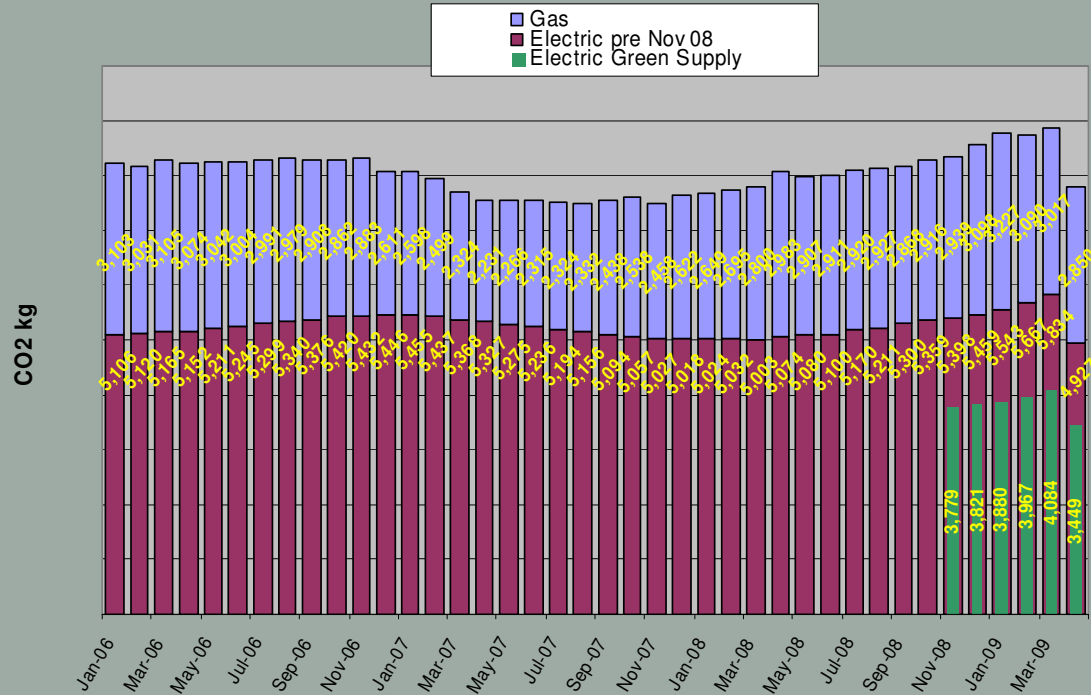


people.innovate.

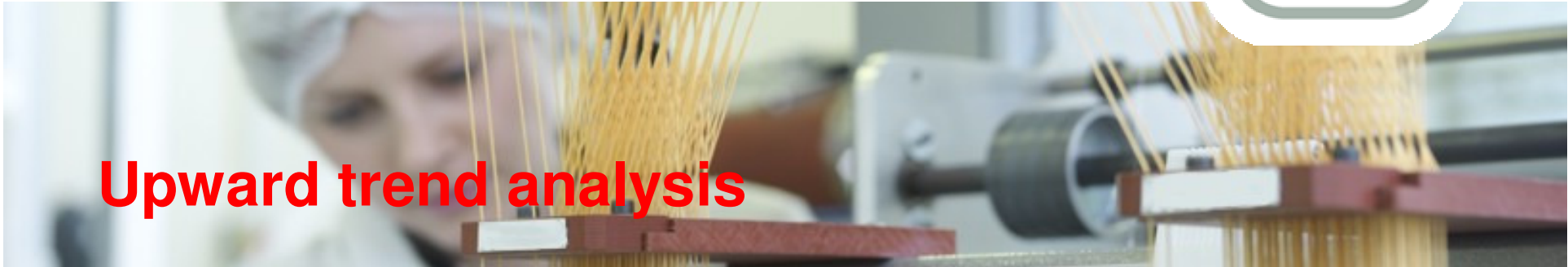


# Combined energy usage

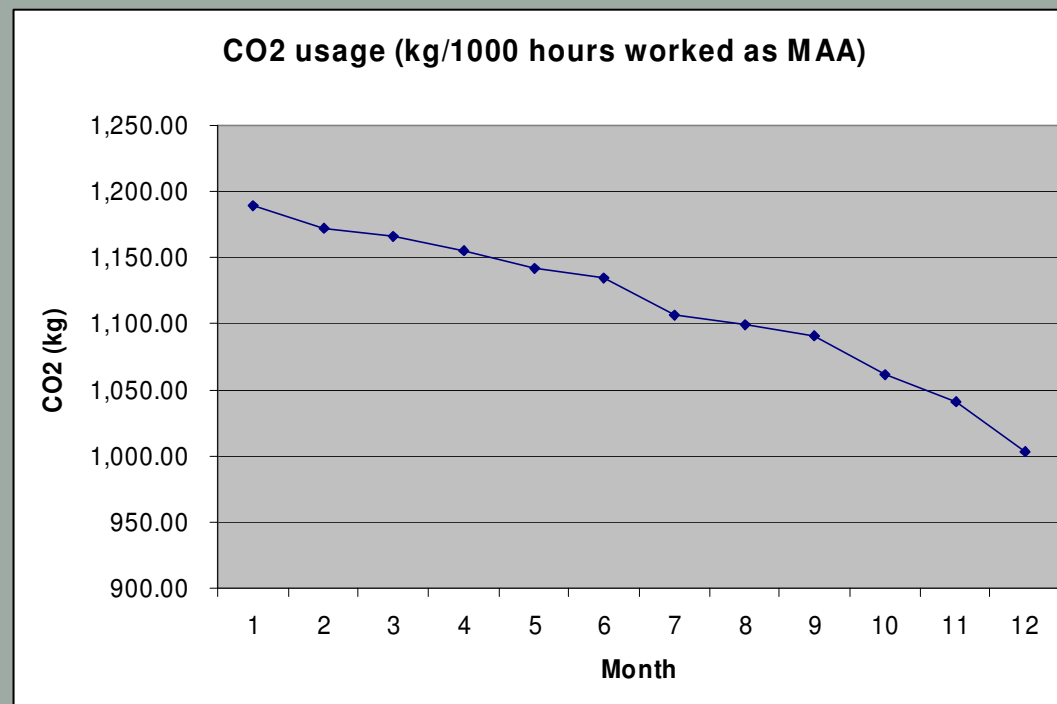
Gas and Electric CO2 - based on 12 months average



8000kg of CO2 = 22,222 miles by car (based on average UK family car returning 29mpg)



# Upward trend analysis



people.innovate.



# Company car usage

Company Vehicle Booking/Travel Log - New Item - Windows Internet Explorer

http://caloch:8082/Lists/Company%20Vehicle%20BookingUsage%20Log/NewForm.aspx?RootFolder=%2FLists%2FCompany%20Vehicle%20BookingUsage%20Log&Source=htt...

Xiros Sharepoint 3 Environment

### Company Vehicle Booking/Travel Log: New Item

Attach File \* Indicates a required field

Driver *	<input type="text"/>
or first named traveller	
Date/Time out *	18/05/2009 12:00
Date/Time in *	18/05/2009 12:00
Mode *	<input type="text"/>
Reason for trip *	Shuttle
TomTom required	<input type="checkbox"/>
Mobile taken	<input type="text"/>
Approx/Est mileage *	<input type="text"/>
Load *	None
Number of fellow travellers *	0
in addition to person named above	
Vehicle condition	Good
Specify	<input type="text"/>
(if attention needed)	
Completed	<input type="checkbox"/>
CO2 rating	155
Automatically inserted for company cars and trains/buses/planes	
CO2/kg	<input type="text"/>
Automatically calculated	

start Energy - Microsoft ... 7 Reminders Microsoft ActiveSync vic 18 may Microsoft PowerPo... Company Vehicle B... EN Local Intranet 100% 11:55

people.innovate.



## Other Business Travel

- Admin book all train and airline tickets, hire vehicles
- The distance travelled for each journey is recorded
- CO2 is then calculated

people.innovate.



[www.nef.org.uk/greencompany/co2calculator.htm](http://www.nef.org.uk/greencompany/co2calculator.htm)

The screenshot shows a web browser window displaying the National Energy Foundation's Simple Carbon Calculator. The page title is "Simple Carbon Calculator" and the URL is <http://www.nef.org.uk/greencompany/co2calculator.htm>. The page features a navigation menu with options like HOME, INDIVIDUALS, ORGANISATIONS, SCHOOLS, ABOUT US, and PRESS OFFICE. A sidebar on the left lists various services under the heading "ORGANISATIONS". The main content area includes a search bar, a description of the calculator, and a table for calculating CO2 emissions from different energy sources. The table has three columns: Energy Value, Conversion Factor, and Result. The energy sources listed are mains electricity (marginal and average), natural gas, domestic heating oil, heating oil (gasoil), propane/butane, heavy fuel oil, and coal. The conversion factors are provided for each source. The page also includes logos for the Carbon Trust, Solar Trade Association, and BSHP Association.

**NATIONAL ENERGY FOUNDATION**  
"Promoting a better use of energy to counter climate change"

Search NEF Website:

HOME | INDIVIDUALS | ORGANISATIONS | SCHOOLS | ABOUT US | PRESS OFFICE

**ORGANISATIONS**

- Homepage
- Benefits
- Save CO<sub>2</sub>
- CO<sub>2</sub> Calculator
- Save Money
- Carbon Solutions
- Consultancy
- Accreditation
- Energy Training
- Partners

Home > Organisations > CO<sub>2</sub> Calculator

### Simple Carbon Calculator

This page contains a simple carbon calculator for use by UK organisations based upon the recommended conversion factors provide by Defra as part of its Environmental Reporting Guidelines.

Individuals wanting to calculate their carbon footprint are recommended to go to the [Carbon Workout](#) section of the NEF website.

**Directions:** Type the energy value from your bill or records into the left column. Then click anywhere outside the cell you just filled. The answer will appear in the column to the right.

Energy Value	Conversion Factor	Result
<b>Building or Process Energy Values</b>		
<input type="text"/> kWh mains electricity (using marginal generation factor)	* 0.43 =	<input type="text"/> kgCO <sub>2</sub>
or		
<input type="text"/> kWh mains electricity (using average emissions factor)	* 0.537 =	<input type="text"/> kgCO <sub>2</sub>
<input type="text"/> kWh natural gas	* 0.185 =	<input type="text"/> kgCO <sub>2</sub>
<input type="text"/> therms natural gas	* 5.421 =	<input type="text"/> kgCO <sub>2</sub>
<input type="text"/> litres domestic heating oil (kerosine)	* 2.518 =	<input type="text"/> kgCO <sub>2</sub>
<input type="text"/> litres heating oil (gasoil)	* 2.674 =	<input type="text"/> kgCO <sub>2</sub>
<input type="text"/> litres of propane/butane	* 1.50 =	<input type="text"/> kgCO <sub>2</sub>
<input type="text"/> tonnes of heavy fuel oil	* 3.223 =	<input type="text"/> kgCO <sub>2</sub>
<input type="text"/> tonnes of coal	* 2.457 =	<input type="text"/> kgCO <sub>2</sub>

Feasibility Studies

Renewable Energy Seminars

**CARBON TRUST**  
RESPONDING TO YOUR OWN NEEDS

**SOLAR TRADE ASSOCIATION**

**BSHP association**

people.innovate.



## CO2 off-setting

- Accredited schemes are now available: previously these weren't. Hard to distinguish which projects above and beyond Kyoto agreements
- We decided to put our offset money aside, looking at ways to install renewable energy sources on site
- Difficult to make a business case for these in terms of cost versus payback, for the scale needed to make an impact on CO2 emissions
- Currently looking at an off-setting scheme in this country



efing  
te

t Name  
1 Compensation

ET: £7.5 million

it Funders  
l England  
rate Investors  
–Corporate funder

ial Funders  
ate Investors  
uals

ts:

# Carbon Compensation

## Limiting Climate Change Using our Mosslands

**Introduction**  
Mosslands have the ability to store huge amounts of CO<sub>2</sub>. Forever. They are being destroyed for peat and we only have a few remaining, we have the ability to restore these crucial landscapes if we act **NOW!**

**Vision**  
To **save** our North West mosslands.  
  
To **restore** these mosslands as a ‘Living Landscape’. To preserve their precious “carbon bank” and develop the land as a haven for wildlife.

To **maintain** these mosslands in pristine condition—providing an eternal and



*A Water Vole—this endangered species thrives in “healthy” mossland habitats*

**Our Expertise**

people.innovate.



## Peat Bogs: halting destruction and restoration

- We discovered this through our Corporate Membership of The Yorkshire Wildlife Trust
- Lancashire Wildlife Trust want to buy up existing extraction licences, to halt further destruction which will release CO<sub>2</sub>, and restore land partly extracted which will capture CO<sub>2</sub>.



## Habitat Management at Xiros

- The buildings and grounds were derelict when purchased by Xiros
- £3,000,000 investment in the buildings
- Grounds remained overgrown
- Habitat management personal interest, so I got the job!
- Forged Partnership with Forster College to maintain the grounds for wildlife by:
  - control invasive species
  - enhance existing wildlife habitats
  - exploit new habitat opportunities

people.innovate.



## The Work

- Brought balsam, knotweed, thistle, dock, nettle under control
- Replaced privet hedgerow with mixed species wildlife hedgerow
- Planted new wildlife hedgerow
- Seeded areas as wildflower meadow
- planted new areas of trees
- Thinned and enhanced existing woodland
- Planted a coppice area
- Improved open ditches
- Provided nest and bat boxes



## The Difference

- Observations:
  - Bats, rabbits, foxes, deer, stoats, frogs, toads, newts, squirrels, shrews
  - Lots of insects as yet not surveyed! – colony of honey bees in the wall cavity
  - 17 species of butterfly recorded
  - 50 species of birds recorded
  - 119 species of wildflowers recorded
  - 21 species of trees recorded

people.innovate.



## Rewards and Awards for Our Efforts

- The benefits of being able to work, surrounded by this landscape are many fold on the health and welfare of staff and have contributed to the following:
  - The Sunday Times Best Small Company To Work For: Top Ten Nationally; 1st place Regionally
  - The Best Companies Award – Three Stars (highest accolade)
- The Queens Award for Industry
- The Green Organisation Award for:
  - Environmental Best Practice, Conservation and Wildlife Projects – Gold Award
  - Architectural Heritage – Bronze Award



people.innovate.



## The Surroundings

- We have a chairman whose hobby it is to create the outstanding formal gardens
- A solid partnership with Forster College to create and maintain an environment to encourage and support wildlife onto our doorstep
- A Managing Director who manages to finance it without it being detrimental to our profitability
- Together we've created a company headquarters to enhance our profile in the business world and place of work where everyone is proud to belong and contribute