



Working Group 3a
Communicating within a
local administration



Communicating Carbon Reduction

Paul Isbell Energy Manager
Bristol City Council UK



ENERGY & CLIMATE CHANGE Communicating to

12th Annual Conference of Energie-Cités

change *our behaviour*



BRASOV (Romania), 25-27 april 2007




TCA Rendezvous

Communicating Carbon Reduction

Paul Isbell Energy Manager
Bristol City Council UK





Issues

- How can energy conservation and climate change become **values shared by all**, elected representatives and municipal staff ?
- What **incentive and communication procedures** should be implemented to reinforce this and to promote internal action ?
- How can one become an **exemplary authority** and **stimulate** others to follow?



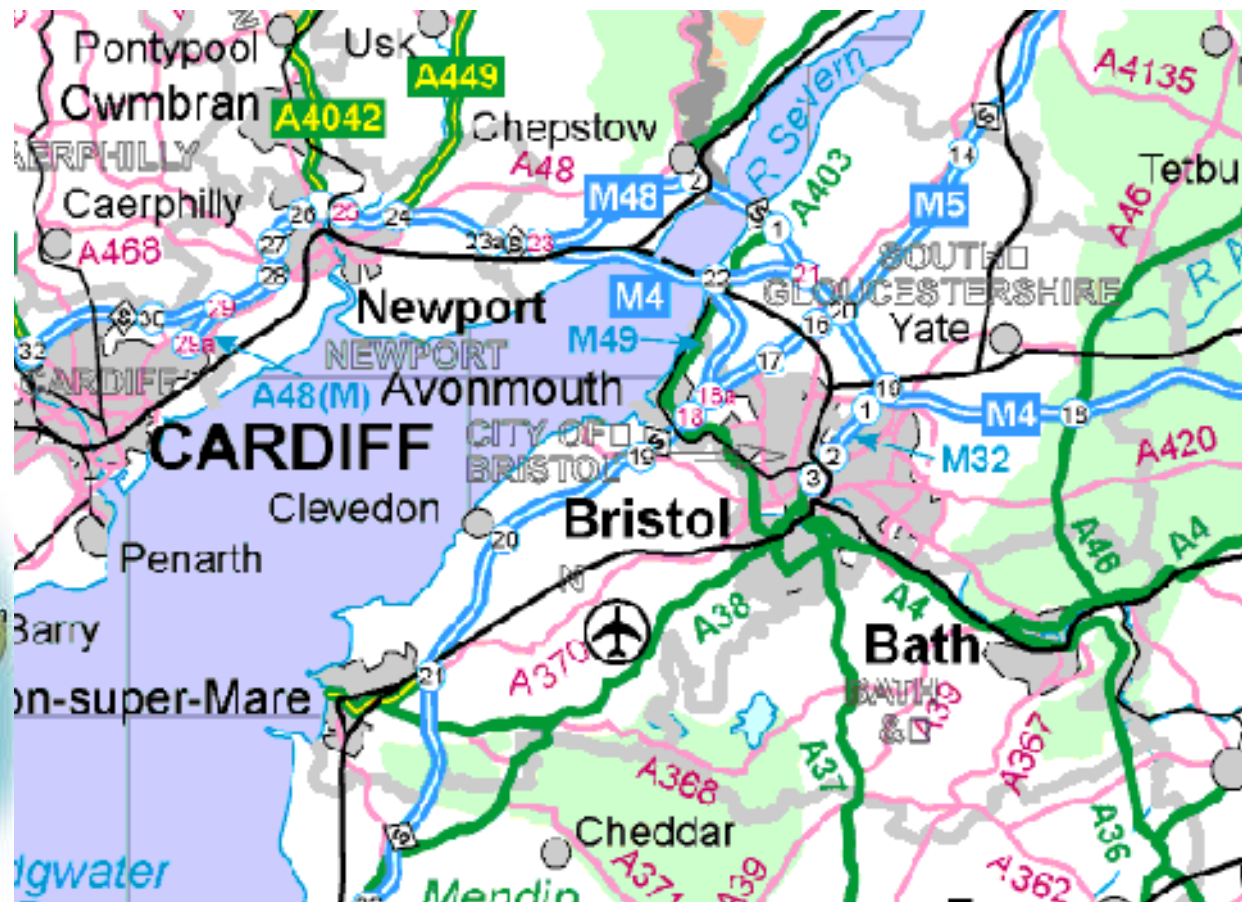
Communicating Carbon Reduction

- **Presentation**
 - **Paul Isbell, Bristol (GB)**
paul.isbell@bristol.gov.uk
- **Analysts:**
 - **Lian Merkx, Delft (NL)**
 - **Christian Trachsel, Neuchâtel (CH)**
 - **Loïc Dautrey, Grand Besançon (FR)**
- **Facilitator:**
 - **Christiane Maurer, Energie-Cités**





Bristol





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1. Top down & bottom up

- **Top level commitment**
 - vision and aims
 - service development priorities
- **A political champion for the cause**
- **A key motivated staff members with the authority to act**
 - much can be achieved between key staff and key elected representative working together



Bristol Vision

- A city that realises its full potential and **exerts influence** appropriate to its status at a regional, national and European level
- A modern, cosmopolitan, ambitious city at the heart of a prosperous and confident area that is the gateway to the South West
- A diverse and accessible city made up of vibrant and balanced communities where **everyone is valued** and can thrive economically, culturally and socially
- A safe city that **promotes** health, learning and **sustainable development**
- A city where no-one is disadvantaged



Bristol Aims

- These aims are shared by **all stakeholders in the city and not just the city council**. They are set out in the **Community Strategy** and are:
 - **A thriving economy**
 - **Learning and achievement**
 - **Health and well-being**
 - **A high quality environment**
 - **Balanced and sustainable communities**





Working Together



Green Capital Launch

Making Bristol a low carbon city
with a high quality of life



Environment
Agency





The Green Capital challenge

All Sectors of the City Encouraged to PLEDGE to:

- **Reduced contribution to climate change**
- **Greener commerce**
- **Better homes and buildings**
- **Sustainable transport**
- **Less waste and improved recycling**
- **Improved local environmental quality**
- **Healthier, locally produced food**
- **Improved health**
- **Balanced and sustainable communities**
- **Enhanced environmental education and awareness**
- **Improved biodiversity**



Environment
Agency





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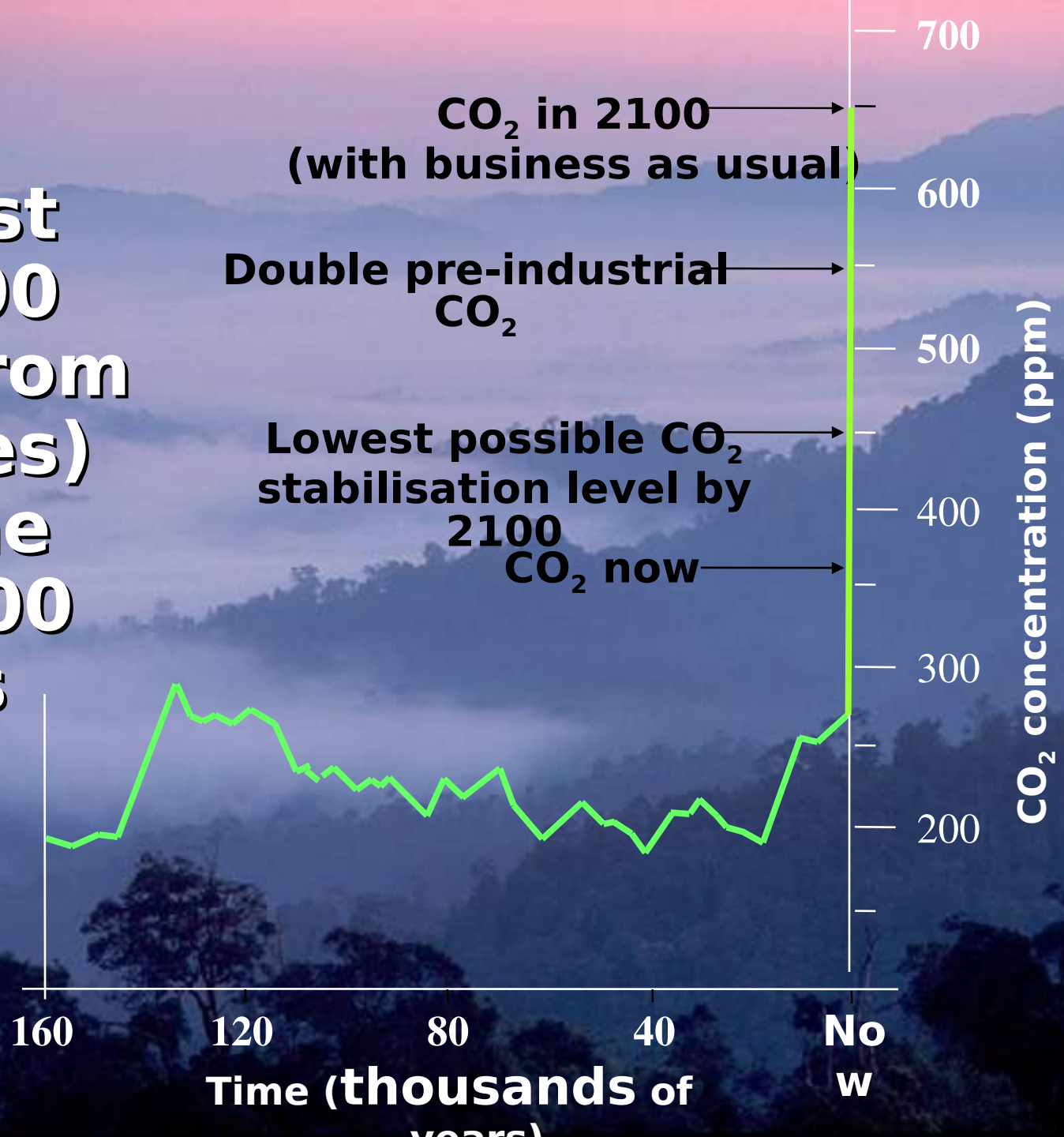


Whole City Foot Print

- Bristol's ecological footprint in 2003 was 191 times the size of the city. If everyone on the earth had the same lifestyle and used the same quantity of resources as the residents of Bristol, we would need **three** Earths to sustain us.

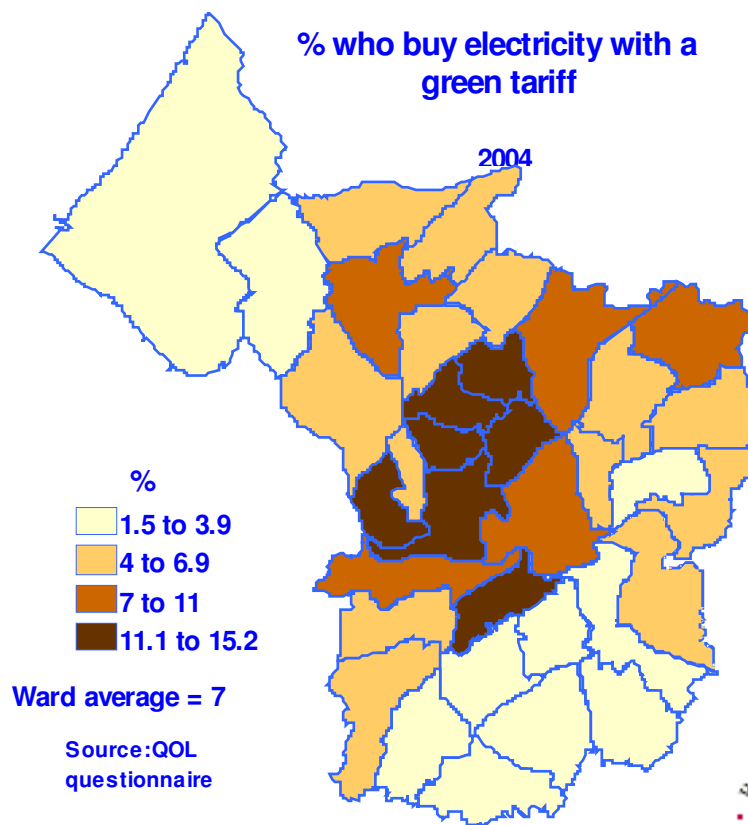
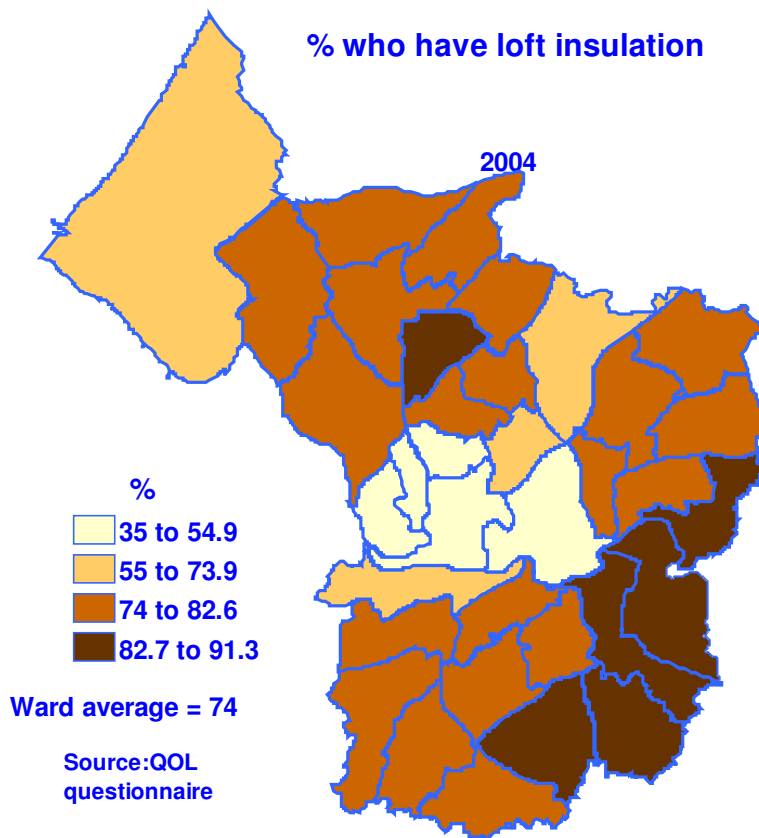


**The last
160,000
years (from
ice cores)
and the
next 100
years**

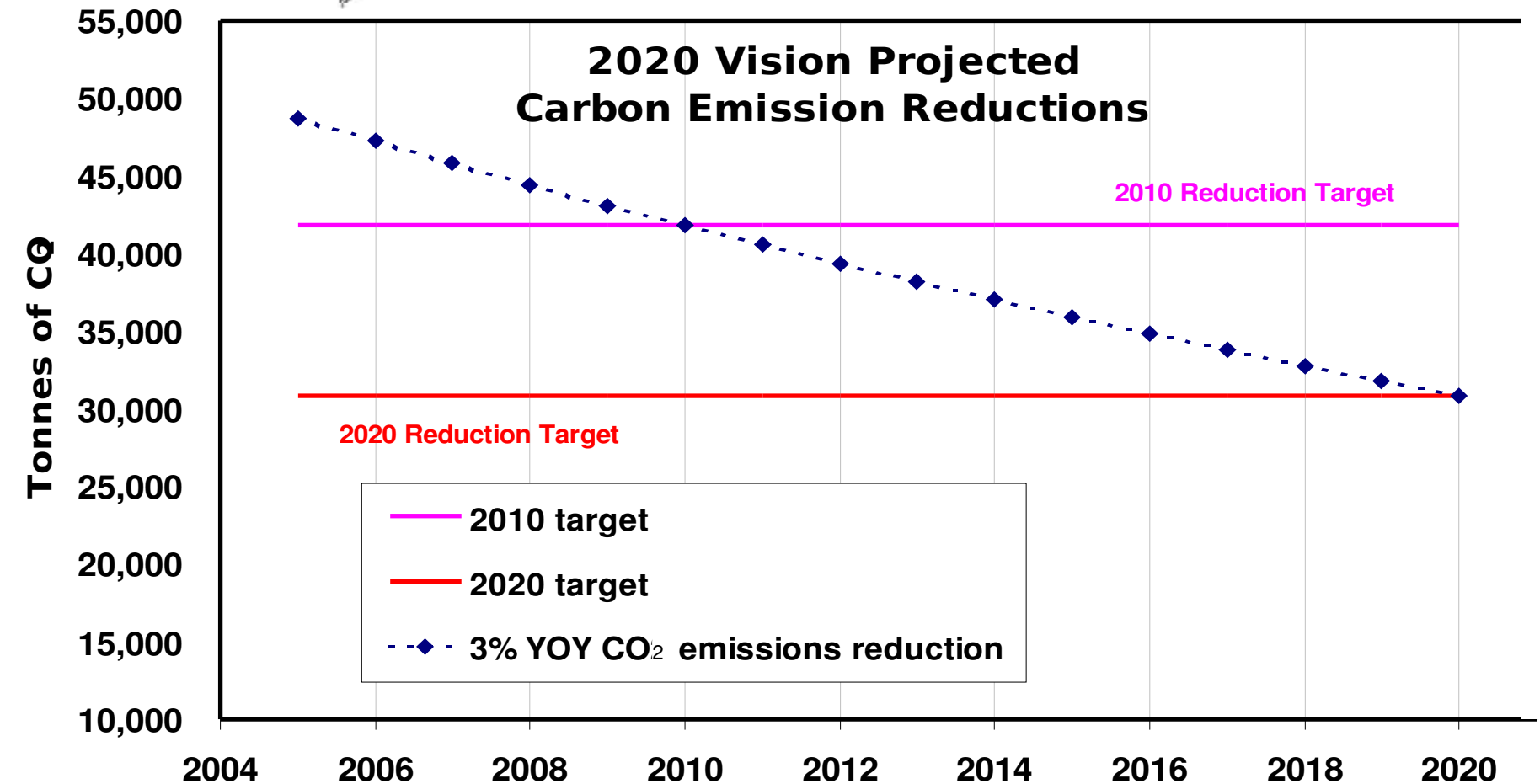


Results Of Quality of Life Survey 2005

Differing Energy Background !



Projected Carbon Reduction



The

Task



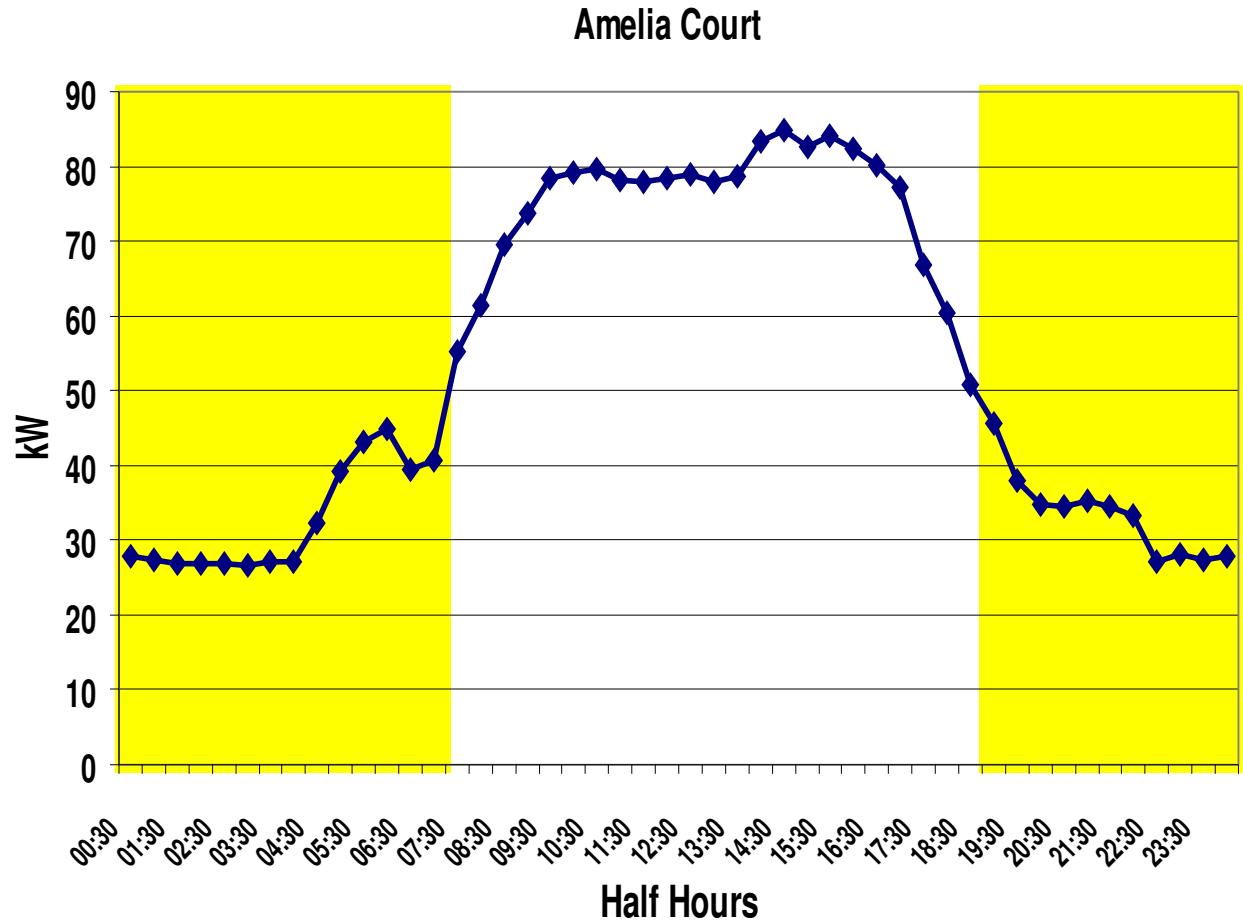


Know Your Building

- **How much energy is being used?**
 - If you don't measure it you can not control it
- **When is the energy being used?**
 - Measure consumption over time. Half hour data
- **Who is using the energy?**
 - Examine wastage – e.g. high consumptions at night
- **Is the amount being used high or low for the building type?**
 - Display Certificate

Example 27% use at night - Why?

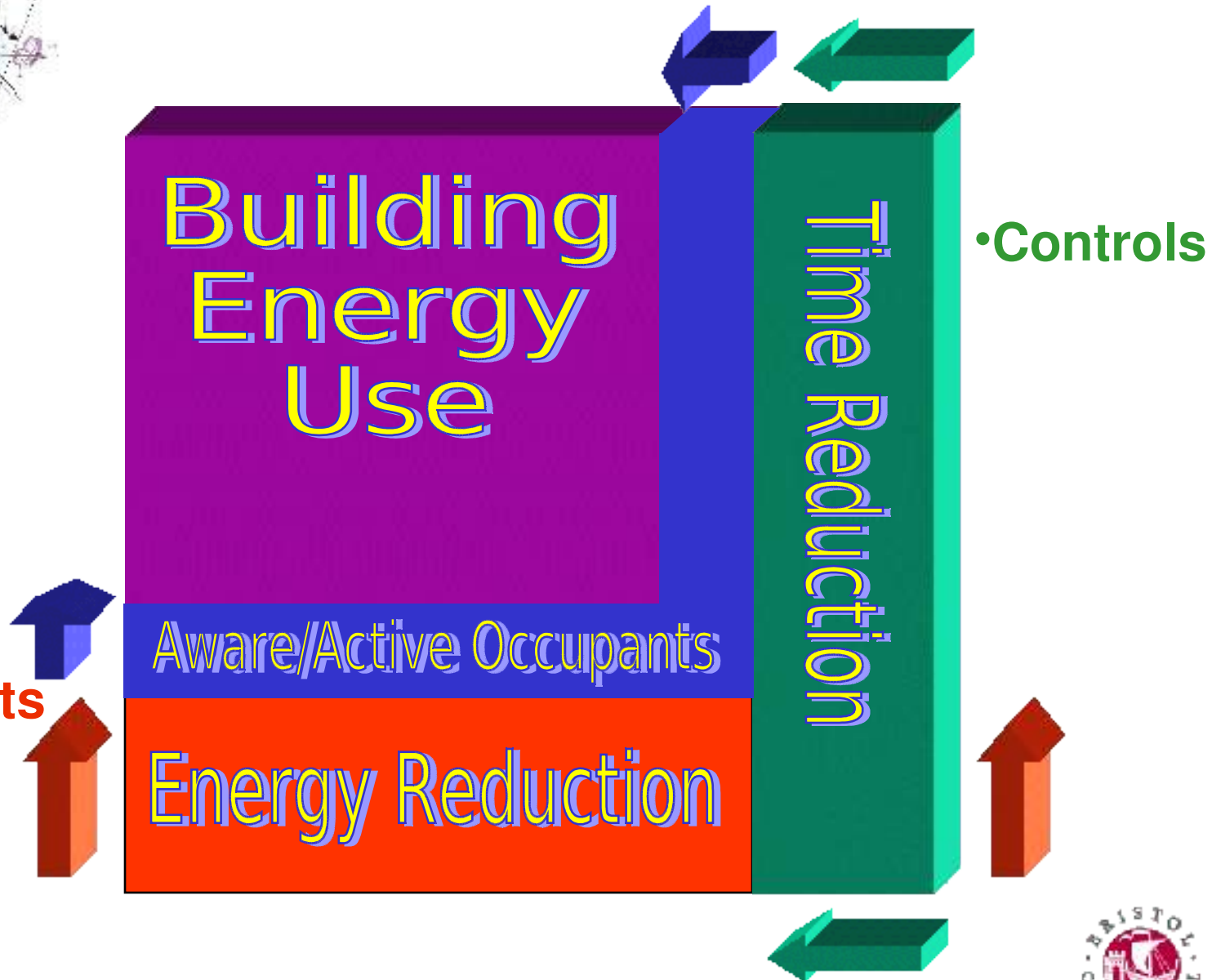
Computers
Lights
Cleaners
Kitchens
Fridges
Drink Machines
Caretakers
Security Lights



Hard to get at Savings



- Awareness Savings
- Improvements
- Lighting
- Heating etc



1. Energy Performance Certificates





Building Certificate

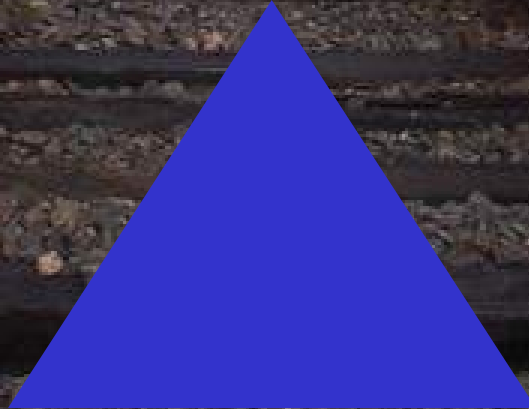


Where is it ?

Can any one understand it ?

Who is interested ?

2. Energy Awareness Raising





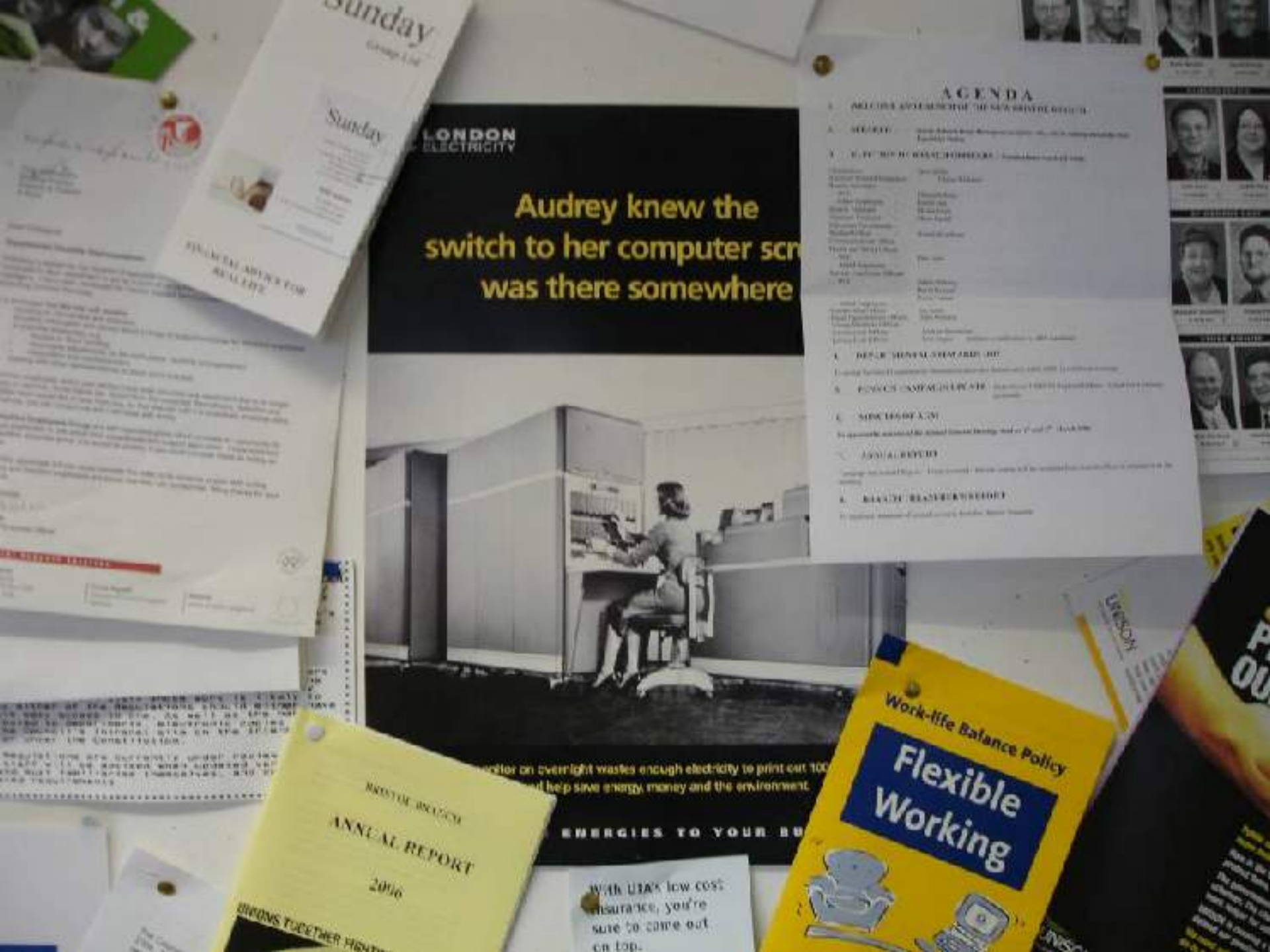
Audrey knew the switch to her computer screen was there somewhere



Leaving your monitor on overnight wastes enough electricity to print out 1000 pages!
Switch off and help save energy, money and the environment.

DEVOTING OUR ENERGIES TO YOUR BUSINESS





**Audrey knew the
switch to her computer screen
was there somewhere**



...ector on overnight wastes enough electricity to print out 100
... and help save energy, money and the environment.

ENERGIES TO YOUR BUSINESS

With LIA's low cost
insurance, you're
sure to come out
on top.

AGENDA

1. WELCOME AND WELCOME TO THE NEW WIRELESS WORLD

2. AGENDA

3. WELCOME TO THE NEW WIRELESS WORLD

4. WELCOME TO THE NEW WIRELESS WORLD

5. WELCOME TO THE NEW WIRELESS WORLD

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© 1985 by the American Psychological Association
0893-3200/85/0000-0000\$01.00/0
DOI: 10.1037/0893-3200.1.1.000



图 2-1-1 所示为 1980 年 10 月 1 日 00 时 00 分至 01 时 00 分的气象数据。

2. **Attività** *È un'attività umana che ha lo scopo di raggiungere un obiettivo.*

- [illegible]

- a. $\text{AgCl} + \text{H}_2\text{O} \rightleftharpoons \text{Ag}^+ + \text{Cl}^-$

- © 2004 Blackwell Publishing Ltd, *Journal of Internal Medicine* 255: 105–112

- Let α denote the measure of $\angle B$. Find all possible values of $\sin \alpha$ and $\cos \alpha$.

4. **THEORY OF THE CASE**

the general of district
and returning to the
and back to the
and back to the



Flexible Working

ANNUAL REPORT

with UIA's low cost



Disjointed Programmes

- A few posters **won't** change peoples actions
- Awareness **must** be linked to **feed back** or expect failure !
- Needs to be **constantly reinforced** - Multisensory
 - What I **hear** I forget
 - What I **see** I remember
 - What I **do** I understand



display

**Energie-Cités' European
Municipal Buildings
Climate Campaign**

**The amazing piece of
equipment to solve
the problem**

Train the Brain



4 Stages of Energy Awareness



Unconscious / incompetent



Conscious / incompetent



Conscious / competent



Unconscious / competent



What is Display™?

- A European Campaign **for the implementation of an “energy ratings” poster displaying CO₂ emissions as well as energy and water consumption's in municipal buildings.**
- Anticipating **the entry into force of the European Building Directive by encouraging a “bottom-up”- oriented approach.** Preparing the grounds for it's implementation.
- **Linked to energy awareness tools to imbed changed actions**



European Buildings Directive article 7...

- *“Member States shall take measures to ensure that for buildings with a total useful floor area over 1,000 m² occupied by public authorities and by institutions providing public services to a large number of persons and therefore frequently visited by these persons **an energy certificate, not older than 10 years, is placed in a prominent place clearly visible to the public.***
- **Clearly visible to the occupants who know what it means !**

The Display Poster

Display Logo provides link back to awareness programmes

A to G Scale

Actions to take to improve ratings

Logo & Contact Details

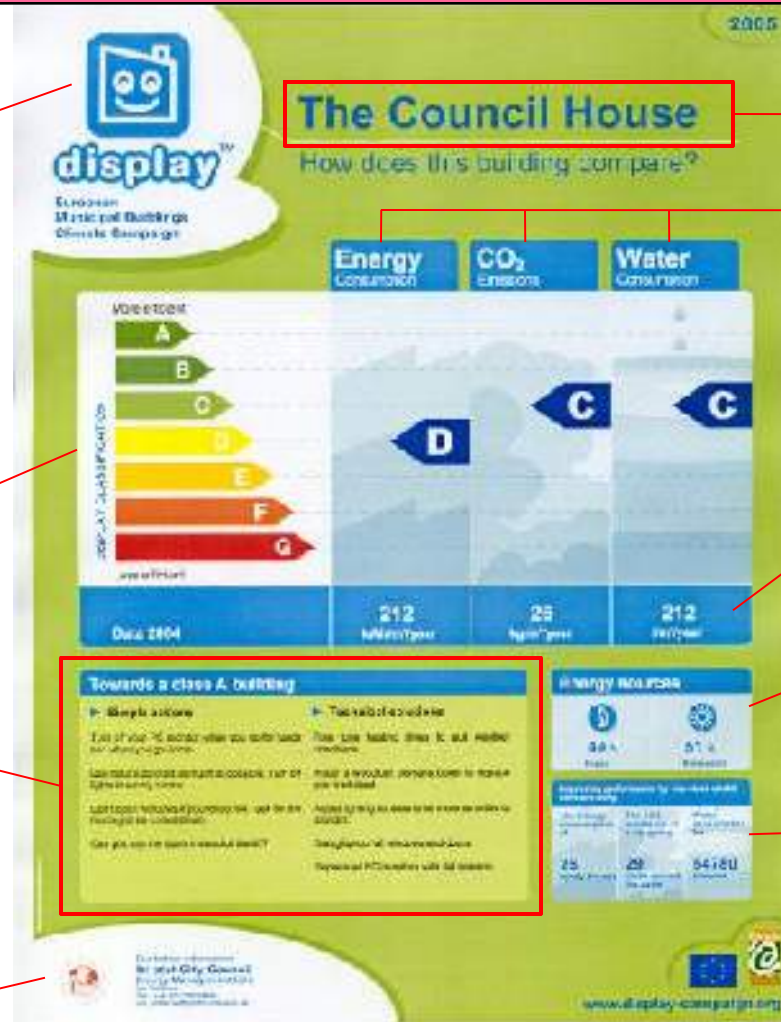
Property Name

Energy Ratings: Energy, CO₂ & Water.

Yearly Averages

Energy Sources

Category Details





On-line Calculation Tool - Transparent methodology

- **Users guide provides a detailed description of the calculation process.**
- **Step by step process**
- **Straightforward**



Energy and water consumption

Reference year:

2003

Weather correction factor:

Water consumption:

m³

Energies and energy sources	Unit	Space heating	Cooling	Water heating	Lighting	Equipment (other)	Total
Gas	kWh				-		
Fuel oil	kWh		-		-	-	
Coal	kWh		-	-	-	-	
District heating	MWh				-	-	
Wood	kWh		-		-	-	
Solar (thermal)	kWh				-	-	
Electricity (conventional)	kWh						
Electricity (green)	kWh						
Electricity (PV)	kWh						
Other	kWh						

[REGISTER](#)

[\[back to summary \]](#)



Details about energies and energy sources

Type of used energy sources

Gas	<input type="radio"/> Natural gas	<input type="radio"/> Licuefied gas	
Coal	<input type="radio"/> Anthracite	<input type="radio"/> Brown coal	
Wood	<input type="radio"/> Logs	<input type="radio"/> Chips	<input type="radio"/> Pellets
Other			

District heating

Energy source	<input type="text" value="-----"/>
District heat coming from a cogeneration plant	<input type="radio"/> Yes <input type="radio"/> No
Primary energy factor	
Specific CO2 emission factor	

Cogeneration unit in the building

Overall electricity produced		kWh
Thereof fed into the grid		kWh

[REGISTER](#)[\[Back to summary \]](#)



Improving performance: towards a class A building

Simple actions

YOU can help reduce the energy and water consumption in this building today by 10 % or more!
Please use energy in a sensible way:

Action 1

Action 2

Action 3

Technical solutions

Solution 1

Solution 2

Solution 3

[REGISTER](#)

[\[Back to summary \]](#)



Assets of Display™

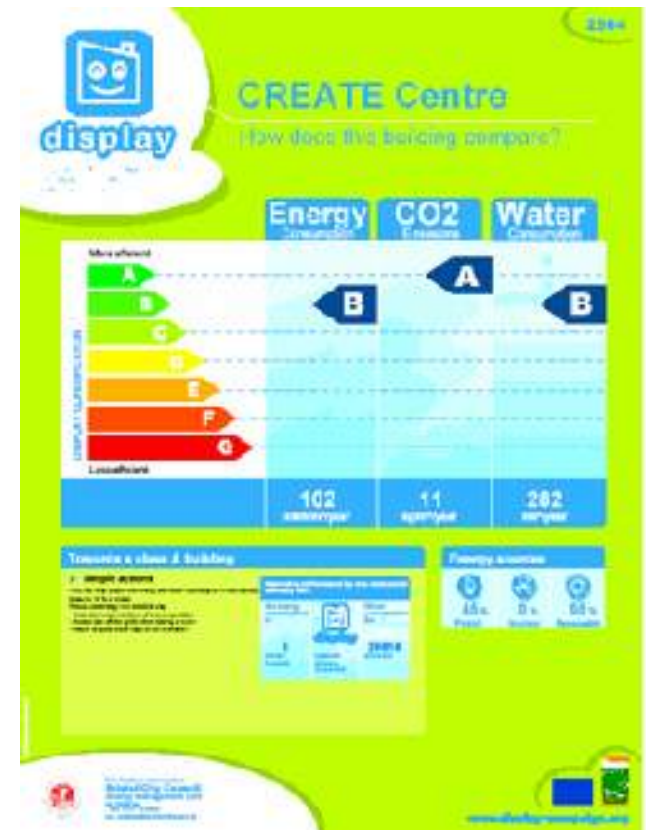
- **Excellent visual way of showing energy performance whilst complying with Building Regulation**
- **‘ Corporate Identity ’ for awareness material**
- **Makes energy and climate issues comprehensible to non-specialists**
- **Encourages people to take action to change their habits**
- **Helps to promote in-house initiatives and tells staff & public ‘ we are doing our bit ’ .**



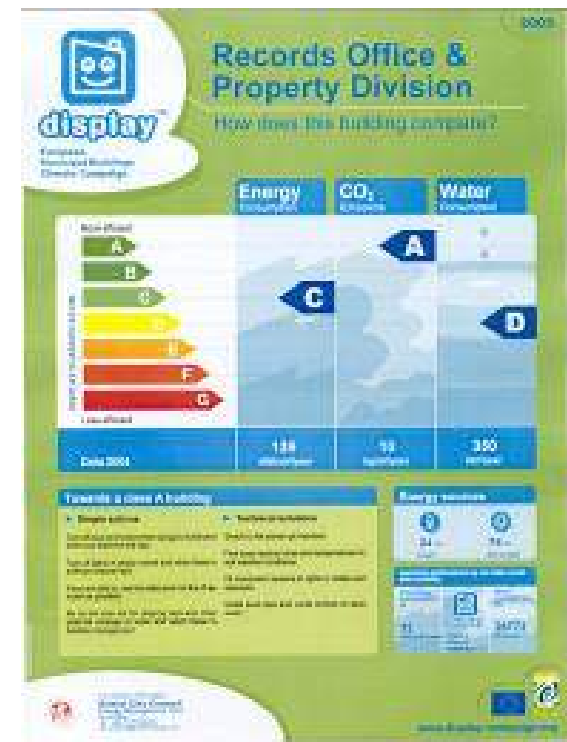
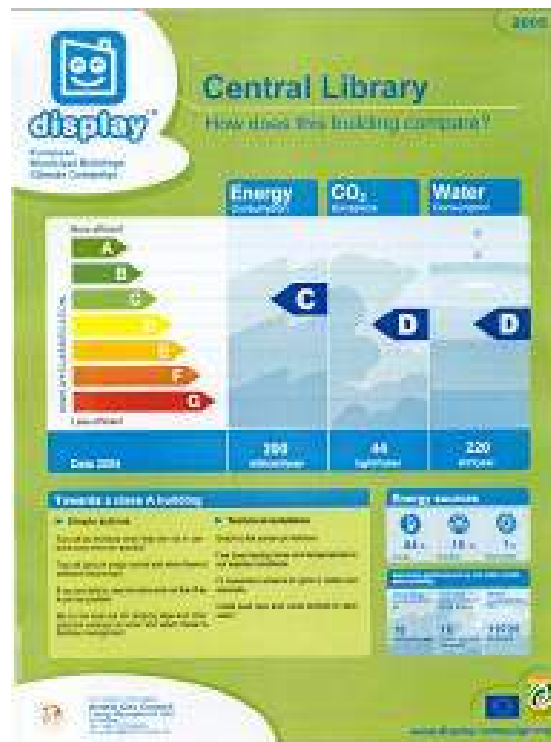
Assets of Display™

- **Increases dialogue** with all sectors from elected members and senior management to security staff & cleaners.
- **Extensive handbook.**
- **Excellent on-line resources:**
- **www.display-campaign.org**
- **Several project co-ordinators to answer e-mail & 'phone queries.**

DISPLAY a good tool



Tools - Posters





Communication

- **internal e-mail newsletter** (distribution around 6,000) **Electronic Weekly News**,
- **Citywide Newsletter** “**The Bristol News**” (distributed to every home in Bristol – up to 150,000),
- **The Energy Echo**, the Energy Management Units newsletter/poster
- **Use the display logo on posters and stickers** in the conventional manner.

Tools - News Letter (Fixed to back of toilet doors widely read)



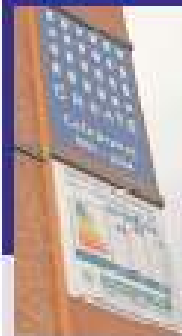
The Energy Echo

Spring 2005

The Energy Management News Bulletin



Displaying Energy Performance



Recent visitors to the CREATE Centre may have noticed a large banner on the side of the building which shows its performance in relation to energy and water usage and corresponding CO₂ emissions. There is also a poster of the same information in the reception area.

The banner has been put up as part of the "Display" campaign co-ordinated by Energie-Cities to promote sustainability in buildings and to stimulate implementation of the EU's

see how energy efficient the property they are viewing is.

In the coming months the Energy Management Unit will seek to produce A3 posters for some of our larger buildings and schools to be put up in reception areas/foyers. The idea is then to review the building's performance regularly and update the posters.

Why are we doing this? To try and illustrate to staff, members of the public, school pupils and teachers the importance of individual actions in relation to energy performance in our



The Kyoto Accord, which aims to curb the air pollution and carbon dioxide emissions blamed for global warming, has come into force seven years after it was agreed.

The accord requires countries to cut emissions of carbon dioxide and other greenhouse gases.

Some 141 countries, accounting for 55% of greenhouse gas emissions, have ratified the treaty which pledges to cut these emissions by 5.2% by 2010.

Russia ratified the treaty in November 2004 - the crucial moment for making the treaty legally binding.

Russia's entry was vital, because the treaty had to be





Post card from Chief Executive

Help save energy ...





Post card from Chief Executive

5 things YOU can do to save energy

Dear Colleague,

Help us to save energy at work:

- turn off your pc monitor when you go home
- where possible turn lights off in empty rooms or when there is enough daylight
- could you use the stairs instead of the lift?
- only boil the water you need when making hot drinks
- report arising tasks to facilities management.

For further information go to
www.bristol-city.gov.uk/sustainability/energymanagement

Thank you for your help,

Nick Gurney
Chief Executive



www.display-campaign.org



A. Colleague

Bristol City Council

Bristol



Say goodbye to standby ...

Turn your monitor off when you go home



display



Leaving your pc monitor
on all night wastes
enough energy to
microwave 6 meals

- would you let your
microwave run for an
hour and a half with
nothing in it?!





Stickers to reinforce message

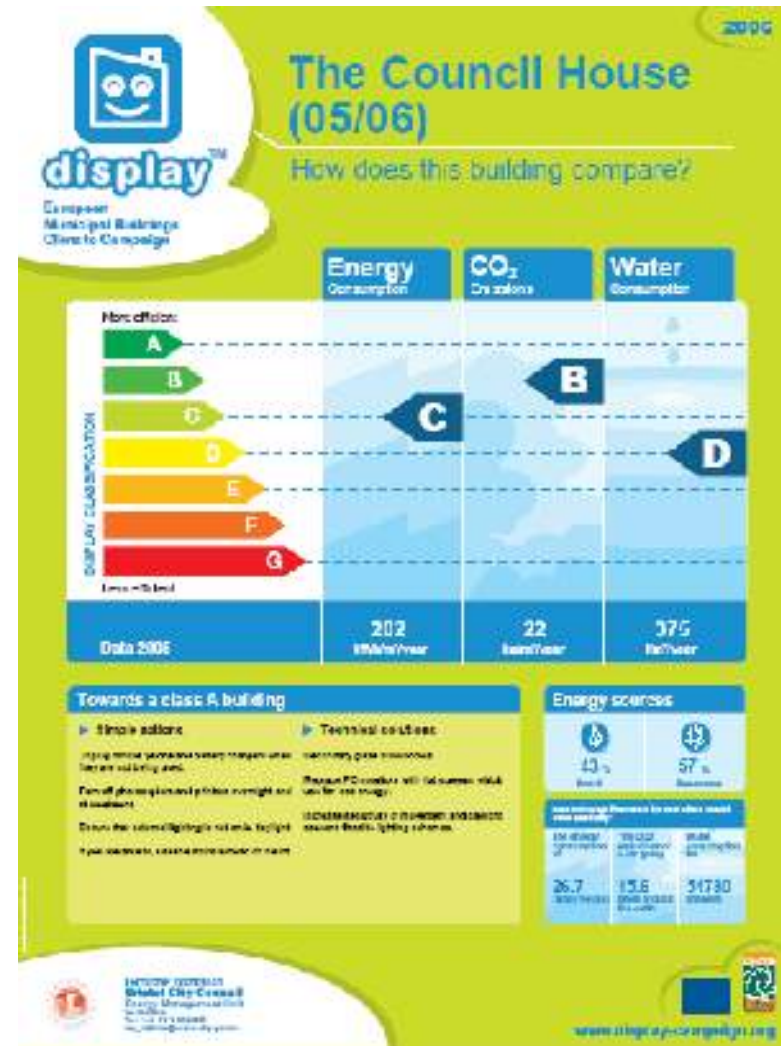
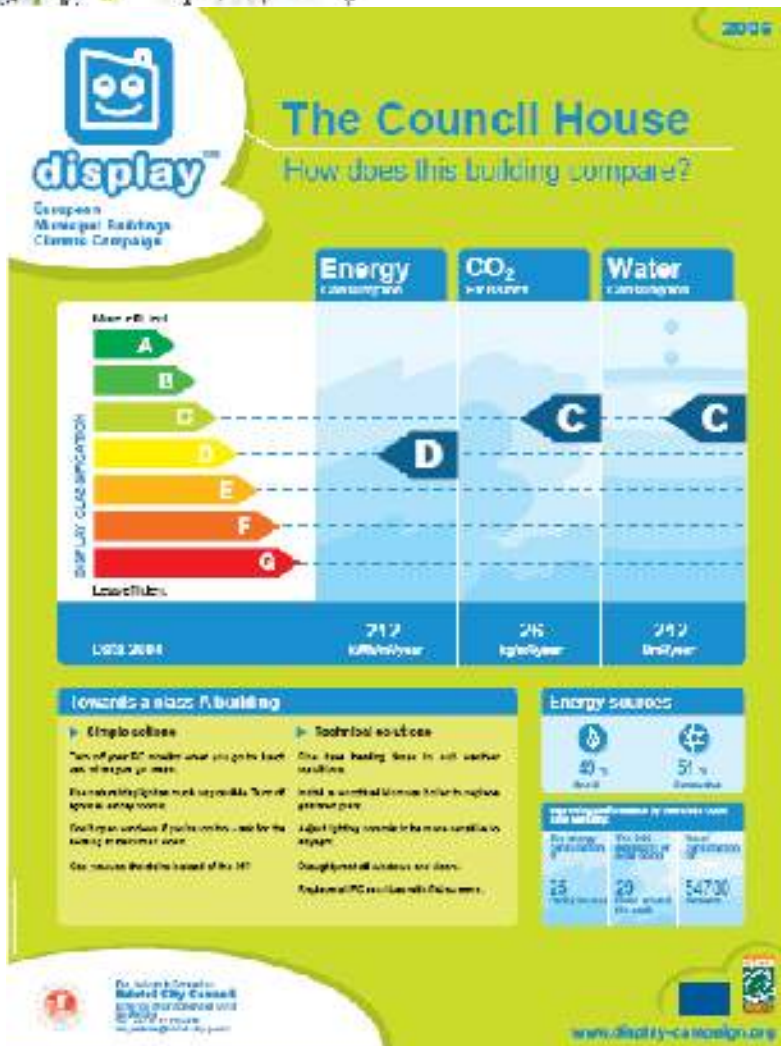




More to come !

- **Linking in with Eco Schools**
- **Development of a managers competency training pack**

Improved Performance





CARBON OFF

SWITCHOFF

Switching off the lights at lunchtime in a cellular office everyday throughout the year can save 20kg CO₂

SWITCHOFF

Switching off or unplugging the microwave when not in use will save 80kg CO₂ a year

SWITCHOFF

Switching off a monitor at night can save as much energy as it takes to toast 20 slices of bread

SWITCHOFF

Ensuring that your windows are shut when you leave in winter can save 15kg per CO₂ night

SWITCHOFF

Recycling 1 tonne of paper (400 reams) saves 15 trees, 2.5 barrels of oil, 2.26m³ of landfill space, 31,320 gallons water, 27kg of air pollutants

CARBON|OFF

100 DAYS OF
CARBON CLEAN UP

www.100days.co.uk





CARBON OFF POSTERS



Other



Blackout Bristol

- Friends of the Earth Bristol campaign for lights to be switched off at night in Bristol.
- Aimed at big offices where interior and exterior lights are left on all night, every night.



It's time to co₂ntrol yourself!



It's time we all co₂ntrolled ourselves a little better. It isn't hard, we just need to turn off photocopiers and printers at night. Don't let taps run - especially hot ones and if you're making a hot drink, only boil the water you'll actually need.



Fill it up!

Actually don't...



Only boil the amount of water you need.

It's time to co₂ntrol ourselves.



Energy Management Unit



Goodbye to standby!



It's time we all exercised a bit more self control - turn off photocopiers and printers so they aren't on at night and weekends.



Energy Management Unit





Last one out?



Hit the lights!

Don't expect someone else to do it - exercise a bit of self control and do it yourself!

Leaving a light on for 15 minutes uses about 500 more times energy than it would to turn it off and back on again.



Energy Management Unit





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Being an Example !

- Show building users and members of the public that they can make a difference to energy saving.
- Show that **your authority is acting to combat climate change.**
- **Share experiences with other authorities.**
- **Influence businesses and organisations locally, nationally and globally.**

Example to follow!



Persistent Champion



Internal
Communication



External
Communication



Poor Awareness



High Awareness

High Carbon



Low Carbon

High Cost



Low Cost

Influence businesses
and organisations locally
nationally and globally

Share experiences with
other authorities

Your Move !

