

# Vision 21

## Gloucestershire's sustainability charity – the first 25 years of action – the next 25 years of action



1992  
Global population 5.46 billion

1993  
Global population 5.54 billion

1994  
Global population 5.63 billion



**EARTH SUMMIT - RIO DE JANEIRO**

**Call to ACTION for all local governments worldwide** 😊

By **1996** all governments to have **Sustainable Development programmes** in place

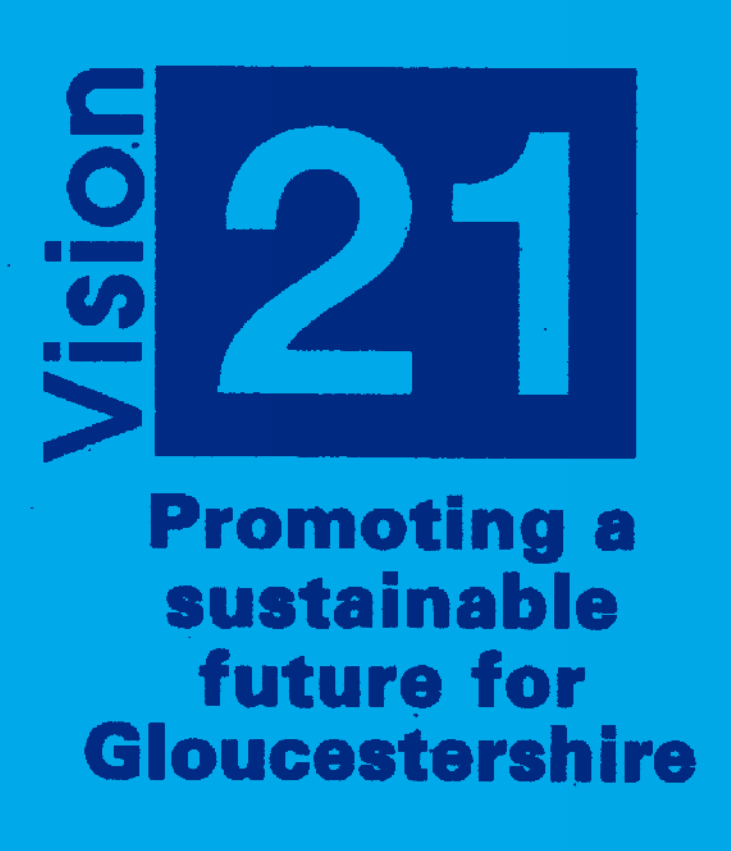
**Sustainability is:**  
'development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'



**Local Agenda 21 groups set up all over the UK to enfranchise local people** 😊

**Bringing Rio Home -**  
Conference at Shire Hall Gloucester – *how to achieve sustainable development in Midlands & South West*

**Vital role** of local government to change their own operations:  
**as policy-makers**  
**as regulators**  
**as enablers**



House of Commons has **no** can recycling facilities ♻️

**95%** of WHO research spending is on **diseases** in industrialised countries 🏥

**Vision 21** sets up **8 working groups**

Government indirectly **subsidies motorists by £1,000** annually 🚗

Gloucestershire's population is **531,400** 👤👤👤👤👤

Gloucestershire uses **14,200 GWh/year** of **non-renewable fossil fuels** ⛽

Preparatory meeting launching **Gloucestershire's Local Agenda 21** - 14th February 😊



*'Only when the last tree is cut, only then will you realise that you cannot eat money.'*  
Cree Indian proverb – (1st citation 1972)

*'There are plenty of good and bad practices, but it may bring pleasure to hard-pressed local councillors and officers that Vision 21 is being touted around the country as the leading example of Local Agenda 21. You have created a world-beater...'*  
Jonathon Porritt, December 1995





# 1995

Global population **5.71 billion**

# 1996

Global population **5.8 billion**

# 1997

Global population **5.88 billion**

# 1998

Global population **5.96 billion**

**HRH The Prince of Wales**  
**praises Vision 21**  
**A Vision for Gloucestershire**

**200** people  
took time  
machine  
to 2020



**Quality of Life survey**



Guidance for  
**sustainable actions**  
for parish, district &  
county government

**Vision 21** contact list reaches **900**

**Stroud Community Planning Conference**

**County's Structural Plan**  
23,000 new homes by 2011

**Vision 21 Massive Art Competition**



**Schools Footprint Project**

**Top 10 concerns** of  
Gloucestershire residents in 1996  
**Transport**  
**Loss of community**  
**Increasing crime**  
**Jobs & local economy**  
**Education**  
**Local environment**  
**Urban spread**  
**Poverty**  
**Public services housing**

**Sustainability Workshop**  
for Tewkesbury Borough Council

**Vision 21** runs  
**3-day workshop**  
with environmental  
educationalists  
in **Vienna**. Participants  
from Eastern Europe



**The Value of Wetlands**  
Ebley Mill Stroud

**Vision 21** invited to audience  
with **MPs and ministers**

**Vision 21** invited to  
**UN Earth Summit II**

**Vision 21** website launched  
20 enquiries per day from  
outside Gloucestershire for  
**Vision 21** information

**Growing Gloucestershire's  
Economy** A Sustainable  
Futures seminar

**Transport Conference**

**David Drew**, MP for Stroud, tells  
Commons of **Vision 21** progress



Conference with  
**Jonathon Porritt: 'Sustainability -  
the new business agenda'**

Gloucestershire **traffic volumes down  
3% = 10,000 fewer journeys** per day.  
School run accounts for  
**20%** of rush hour traffic

**Carlessness campaign**  
celebrates 3rd year

Saturday 5th December  
**Vision 21 EGM** elects directors at  
Pittville Pump Room: **160 attend**

**Future of Transport** in Cheltenham



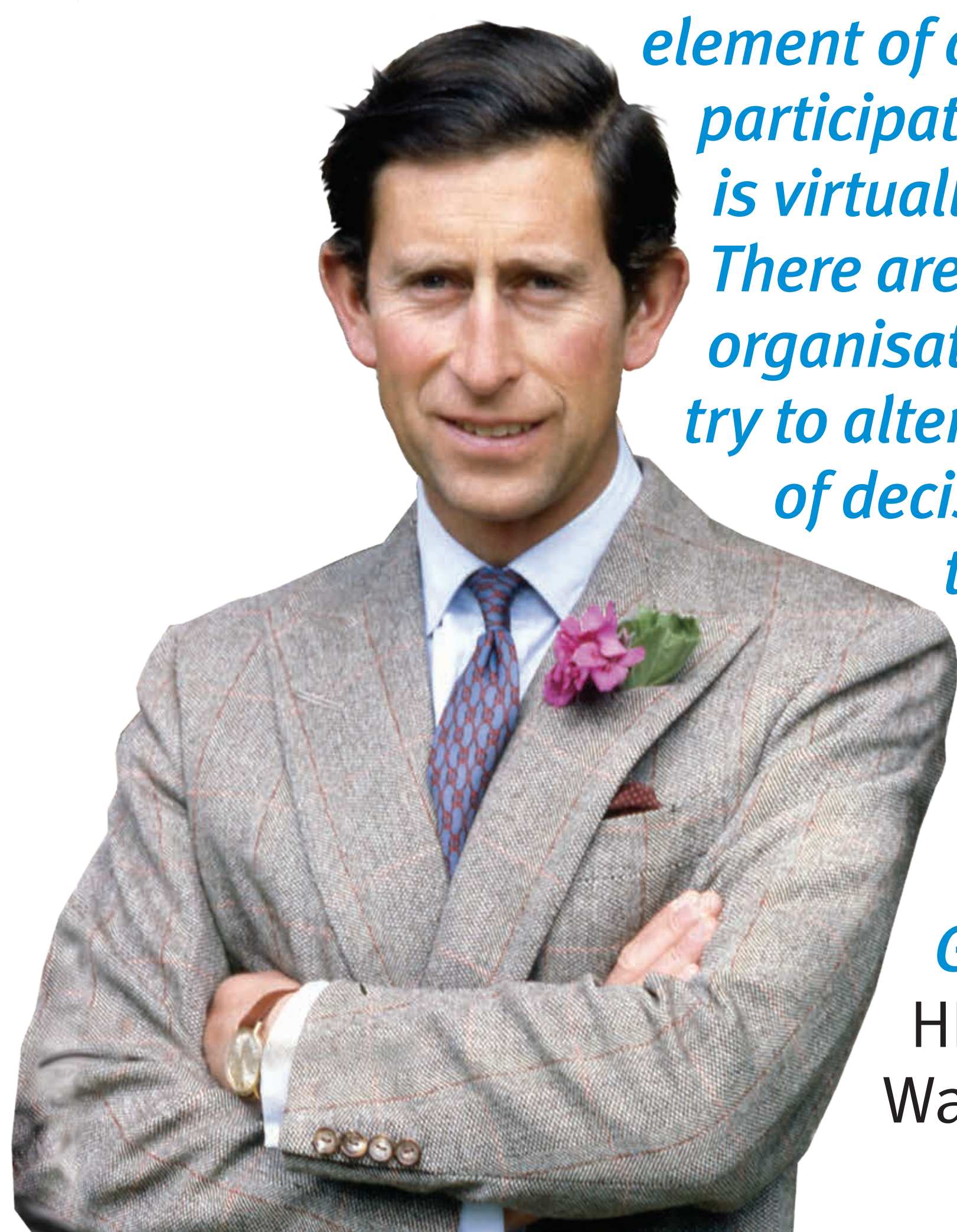
*'We do not have a  
freehold on the Earth,  
only a full repairing lease'*  
Margaret Thatcher, 1998

*Sustainable Gloucestershire -  
the Vision 21 handbook for creating a brighter future.*

*'Any approach to today's problems  
of environment and development  
which does not have a strong  
element of community  
participation  
is virtually certain to fail.  
There are a number of  
organisations which do  
try to alter the balance  
of decisions ... towards*

*those who live and  
work in the local  
community. One  
example is the  
Vision 21 initiative in  
Gloucestershire...'*

HRH the Prince of  
Wales, March 1995



*'This agenda is published by Vision 21 as  
a summary of findings of relevance to local  
government. It urges all levels and branches of  
local government in Gloucestershire, from parish  
to county, to turn this community-based agenda  
for change into practical action to  
bring about sustainability at the local,  
national and international level. Our  
future depends on it.'*  
**Lindsey Colebourne**  
Co-ordinator, Vision 21, 1996

**International  
Year of the Ocean**



**Vision 21** exhibition panel **2** of **12**  
*the first 25 years of action - the next 25 years of action*



1999  
Global population 6 billion

2000  
Global population 6.12 billion

2001  
Global population 6.2 billion

2002  
Global population 6.28 billion

2003  
Global population 6.36 billion

**Car-Free day**  
**Cheltenham** – 😊  
streets closed all day

**Forest of Dean District Council** (FoD) start developing their **Agenda 21** strategy

**Clean Energy Classroom** visiting local schools to raise climate change awareness

**1st AGM** 4th September

**Vision 21** plans move away from Shire Hall.

Active local groups:  
**Cheltenham, Stroud, Gloucester, FoD, Bishops Cleeve, Bourton-on-the-Water, Churchdown**

**Vision 21** (Gloucestershire) Ltd incorporated 8th February

**Computer recycling project** grows

**Gloucestershire Rural Transport Partnership** and **Integrated Transport Group** set up

**GCC Quality of Life Indicators** survey

**Forest Food Links** expands

**Sustainable Forestry & Timber Co-op** gets into gear, based in Painswick

**Vision 21** becomes 1st tenant of **Cheltenham Centre for Change**, Portland Street

**Gloucestershire Round Table for Sustainable Development** 1st meeting

**Gloucestershire Biodiversity Action Plan** (BAP) starts 23rd Nov registered as charity 😊

Grant to deliver **Basic Sustainable Living skills** for people on low income

Start of weekly **‘How to ...’** talks – first one is **‘How to grow your own fruit and vegetables’** 😊

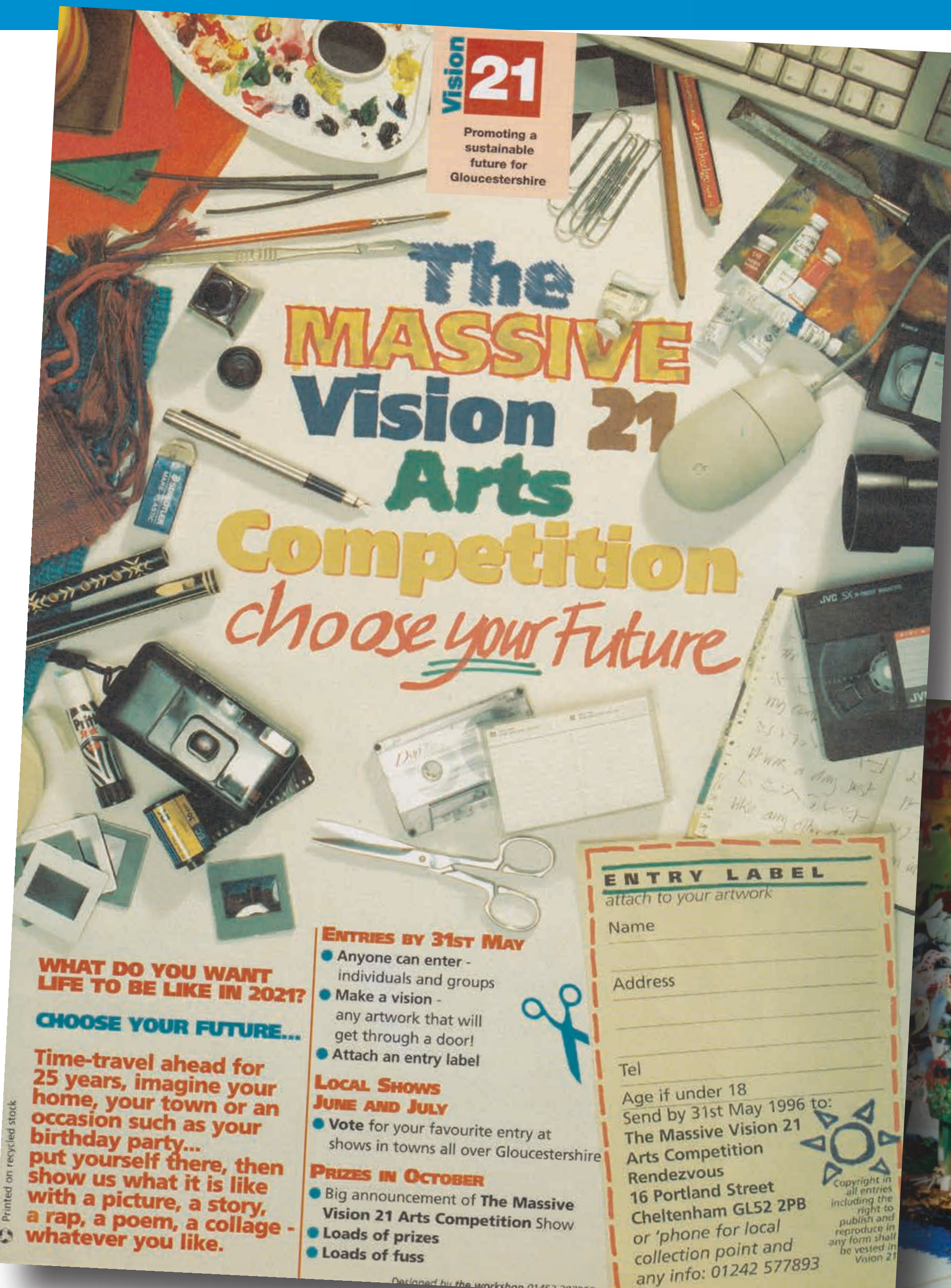
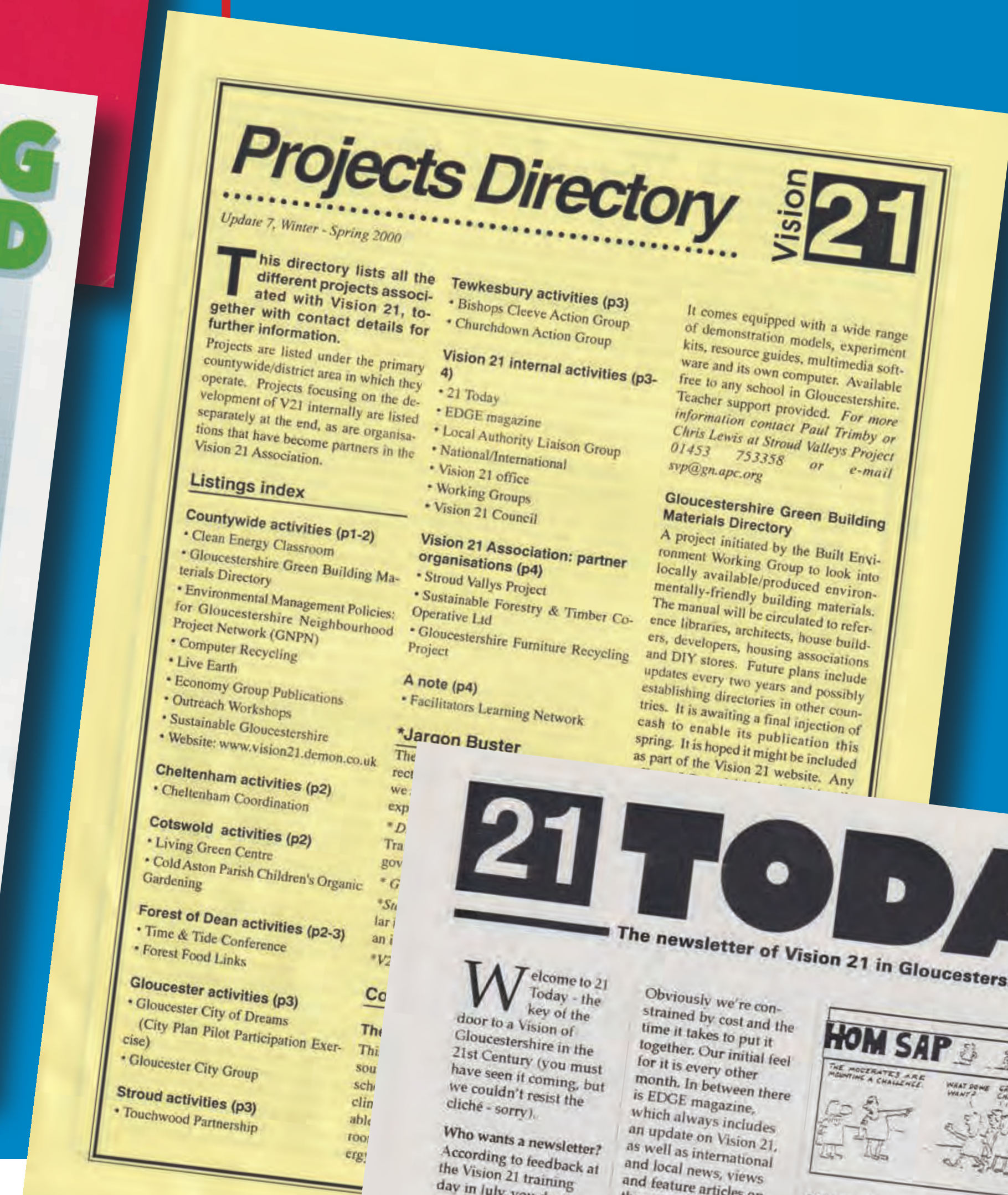
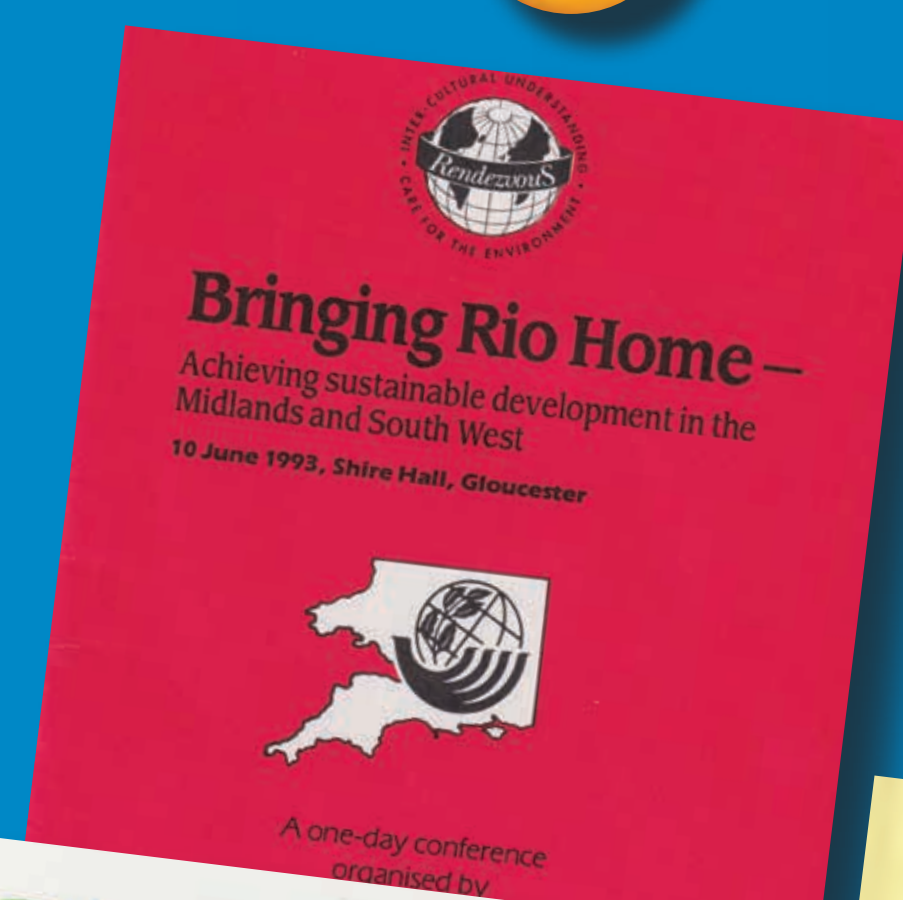
**Resource and Information officer** appointed

**‘Sustainable Life Skills’** workshops

Resourceful Cheltenham **‘Green Directory Project’** worth **£460k** over 3 years

**Reclaim** the 1st local reuse scheme is piloted 😊

**Meetings & forums** helping make **Cheltenham more sustainable**



**Vision 21**  
**Massive Art Competition**  
**1996**



**International Year of Ecotourism**

**International Year of Mountains**

**vision 21** **Awesome Statistics**

**Vision 21** have actively stopped approximately **1 megatonne** of waste from going to landfill.



**International Year of Freshwater**

**vision 21 @ 25**



2004  
Global population 6.44 billion

2005  
Global population 6.52 billion

2006  
Global population 6.6 billion

2007  
Global population 6.8 billion

## Adult Learners Week

### Reclaim grows:

3 paid staff, 12 volunteers

### World Environment Day Art Project: *Oceans & Seas*

12 schools participated

**Reclaim warehouse** opens in Windsor Street

### *Earth Care Manual*

by Patrick Whitefield

*'A book of solutions rather than problems.'*

*'Yet there's no escaping the fact that the Earth is in a dire state, and getting worse. In the 23 years involved in ecological movement almost every aspect of planetary health has got worse.'*

**Reclaim provides 500 people with furniture** 😊

Our **1st Reclaim van** purchased (pre-owned) 3.5t Luton

**Community Repaint Scheme** starts at **Reclaim**



**Shop in Hesters Way** opens

**Reclaim sells 1,500 pieces of furniture** 😊

**2nd Reclaim van** added

**17 volunteers** giving **4,300 hours**

**A WRAP initiative** targets businesses and trade parks

Community Recycling Champions starts

**Recycling rates increase 10% after Vision 21 canvasses** 😊  
9,000 homes for Cheltenham Borough Council

**Gloucestershire Floods - climate change on our doorstep**  
66 volunteers throughout the year

**The Impact of Climate Change & Peak Oil on Cheltenham** report



RECLAIM



International Year of Deserts and Desertification

International Year of the Dolphin

International Polar Year 2007-09

### vision21 Awesome Statistics

Since 2004 Reclaim has helped over **250 people** to volunteer, many have then gone on to further training or paid employment.

Comic Relief in plastic row



### vision21 Awesome Statistics

Since Reclaim started over **10,000 people** have been able to furnish and decorate their homes to a good standard.

vision21@25

Vision 21 exhibition panel 4 of 12

the first 25 years of action – the next 25 years of action



# 2008

Global population **6.77 billion**

UK chief scientific adviser to DEFRA, **Professor Bob Watson**, warns about the prospect of a **4°C degree temperature rise**

# 2009

Global population **6.85 billion**

# 2010

Global population **6.93 billion**

**Centre for Change merges into Vision 21** (Gloucestershire) Ltd., 30 April

**Reclaim relocates** to Lansdown Industrial Est.

**14,000 domestic batteries** collected

**9 tonnes of Yellow Pages collected and recycled**

**Community Recycling Champions** grows across county

**Gloucestershire Green (Shopping) Guide**

**Vision 21** attends **14 different events throughout the county** to promote sustainability

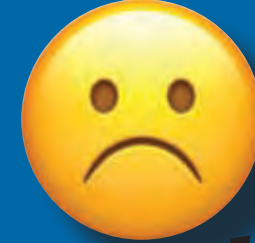


**CBHomes Energy Efficiency talks** for tenants

*Every year since 2005 nearly 3M tonnes of soya products (beans, meal, oil) are imported into the UK, most for animal feed. It's estimated that since 1970 about 20% of the Amazon rainforest has been lost as a result.*



**The effects of climate change are increasingly apparent**



**Funding from local government and grants become ever more challenging**

**Vision 21** is active member and sponsor of **Cheltenham Environment Forum**

**Climate Change Condensed** training sessions

**Vision 21** chairs a **very successful Cheltenham Low Carbon Partnership** to establish voluntary, business and public sector partnerships



Ongoing **development opportunities** for volunteers

**Future Jobs Funding** for two environmental business advisors

50% match funding secured to employ a **Transition Town Officer**

**21 Today** newsletter goes to **4,500 people every 6 weeks**



**Water 21** facilitating framework of water experts

**Reclaim expands** with more warehouse space

**Vision 21** chairs **UN RCE Severn Food Group**

**Transition Town** activities continue to grow

**Get Up and Grow project**

Contributions to **local strategic documents**

**Reclaim selling 5,000 items** each year, mainly to people on low income

**50+ volunteers** throughout the year

**There is almost no battery storage in UK or EU**



**International Year of Planet Earth**

**International Year of Sanitation**



**Coal plants** generate almost **33%** of the UK's electricity (**3% in 2019**)

Solar capacity in the UK =



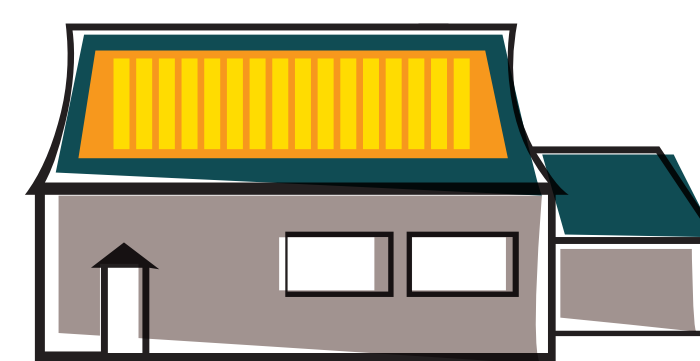
**14.6MW**

**International Year of Natural Fibres**

Only approx. **200** electric vehicles (EVs) in the UK



Typical domestic rooftop solar array cost is around **£12,000**



**1%** of UK electricity comes from wind



**International Year of Biodiversity**

**vision21** **Awesome Statistics**

**Since August 2005 we have sold about 20,000 of paint that otherwise would have been thrown away.**

**vision21@25**

Vision 21 exhibition panel 5 of 12

the first 25 years of action – the next 25 years of action



*Real knowledge is to know the extent of one's ignorance.*  
Confucius



# Vision 21

## Gloucestershire's sustainability charity – the first 25 years of action – the next 25 years of action



**2011**  
Global population **7 billion**

**New value systems are required which value the environment, work-life balance and volunteering rather than profit.**

**2012**  
Global population **7.1 billion**

### Cheltenham Climate Champions 😊

**'Don't Bottle Out'** a Cheltenham Mayor's initiative: refill and reduce the use of plastic bottles

**Cheltenham Low Carbon Partnership** creates **Big Green Bundle** business info website

**Get Up and Grow More** to encourage low-income families in Tewkesbury, Cirencester and Cheltenham

**Grow Vision** to reduce food miles

**Electric bike use** promoted

**Transition Town becomes separate entity**

**Reclaim sells 6,000 items**, redirecting **669 tonnes** from landfill

**Cheltenham's 1st Open Green Homes event:** 10 homes demonstrating low-carbon living open to the public for one day with **500+ visitors**

*'If you think you are too small to make a difference, try sleeping with a mosquito.'*  
His Holiness the 14th Dalai Lama

### Vision 21 Think Globally Act Locally 😊

**Reclaim** engages with the unemployed and reserves places for 'hard-to-place' volunteers

**Reclaim Cycles:** a new initiative to salvage and repair old bicycles

**Reclaim runner-up in Heart of Gloucestershire Awards**

**Road Show** to improve recycling rates reaching **1,625 people** across 14 events

**'Rethink'** GCC initiative for **Vision 21** to train the trainers about **food waste**



**Cheltenham Green Doors**  
Green Open Homes event runs for the 2nd year: **16 Green Homes** open to the public over **2 days** **500+ visitors**

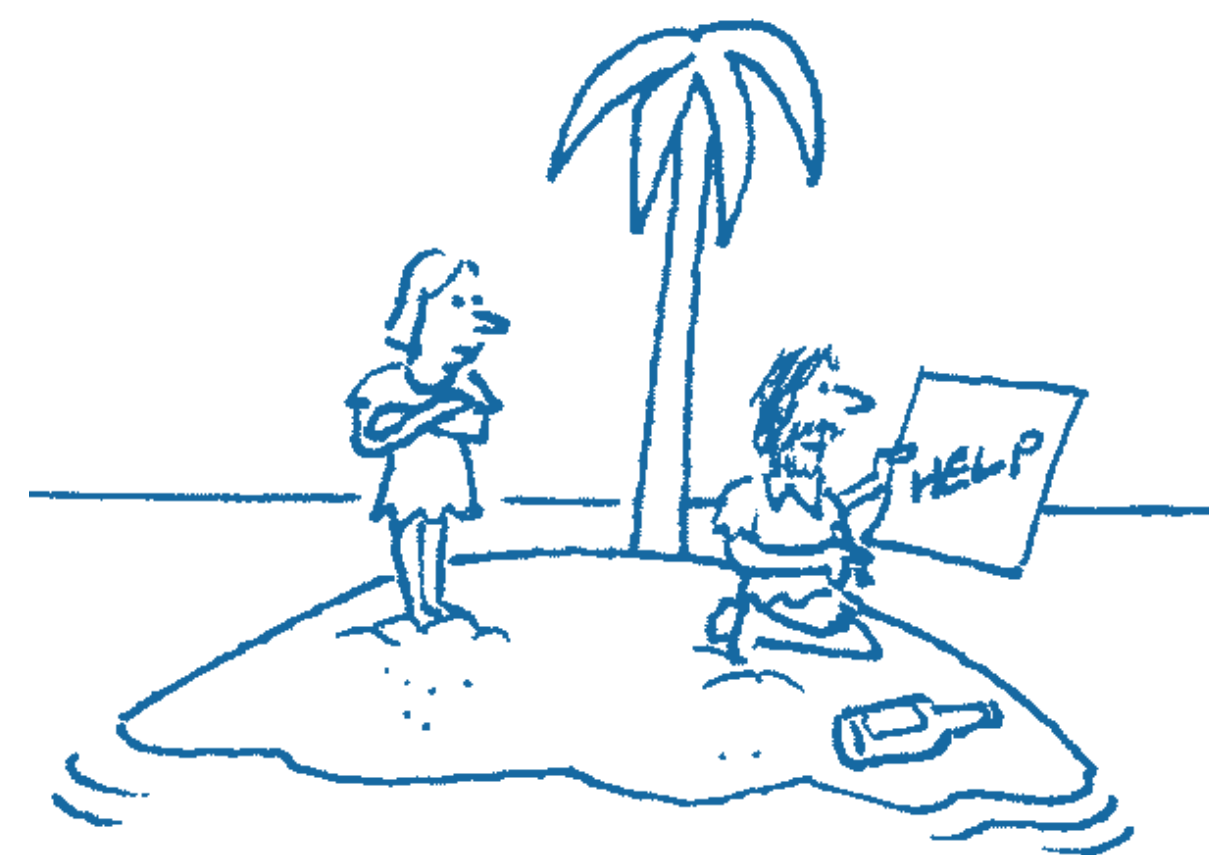
**International Year of Forests**

**United Nations Decade on Biodiversity 2011 to 2020**

**Vision 21 Awesome Statistics**

**Vision 21's 'Every Can Counts' initiative has collected 440,000 cans (= 6,600Kg of aluminium).**

# cheltenham green doors



*'I hope that wasn't a plastic bottle'*



School Run



Vision 21 exhibition panel 6 of 12

the first 25 years of action – the next 25 years of action



**2013**  
Global population **7.49 billion**

**2014**  
Global population **7.27 billion**

**2015**  
Global population **7.36 billion**

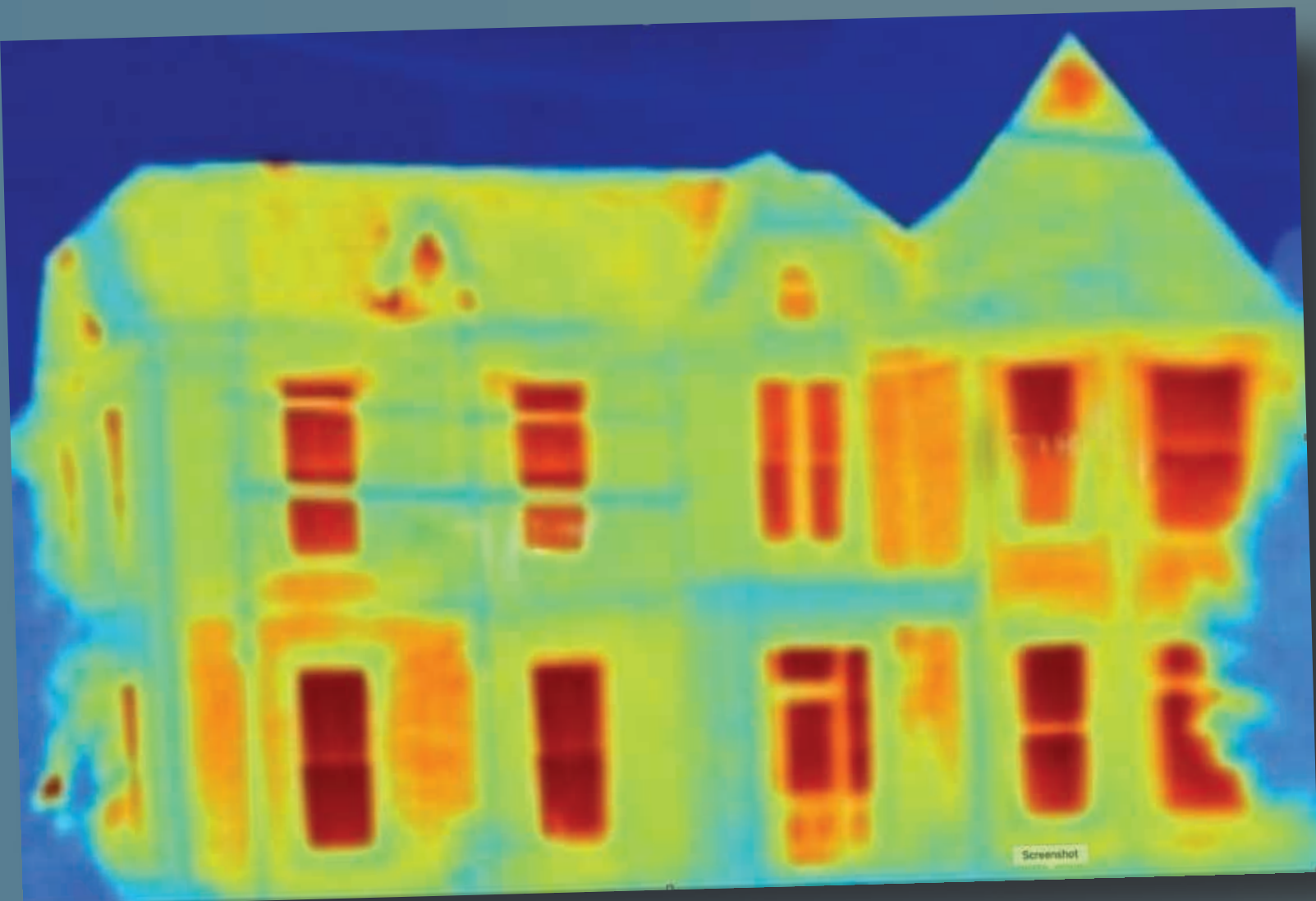
Promotion of  
**Green Garden Share**

**Community Energy Advice**

**Repaint** project sells **4,000l of paint** that otherwise would have gone to landfill 😊

Around **99%** of **energy storage capacity** is provided by pumped hydro and only **20 to 50 MW** is battery storage. 😞

**Cheltenham Green Doors**  
3rd year: **13 Green Homes**,  
**500+** visitors over **2 days**



**Moved** from 30 St Georges Rd to  
**CCP 1st Stop** in September

**Get Up and Grow More**  
2-year funding ends; however,  
Tewkesbury allotments continue

**‘Cando’ and Every Can Counts**  
Also includes cable boxes placed in  
companies and other organisations



**Cheltenham Green Doors**  
**22 Green Homes**,  
**560** visitors over **2 days** 😊



**Reclaim** continues to help ‘hard-to-place’  
volunteers working with **SEETEC, Jobcentre  
Plus & Community Payback** 😊

**Priors Park (Tewkesbury) Edible Garden  
& Community Allotments** forms out of  
**Get Up and Grow More**

**Eat More Veg project** concludes  
successfully after 2 years

**Lansdown Community Composting Club**  
comes under **Vision 21** umbrella

**Transition Town Cheltenham**  
(TTC) rejoins **Vision 21**

**Thermal Imaging** - a TTC project  
incorporated into **Vision 21**

**Annecy Gardens** (Sandford Park)  
**community vegetable garden**  
launched

**Reclaim**  
**1,800 families helped**

**Low Carbon Partnership** wound-up 😞

**VISION 21** **Awesome  
Statistics**

Between 2011 and 2015  
**Vision 21** ran the **Green  
Open Homes & Gardens**  
weekends: **80 properties**  
attracted **2,672 visitors**.



*When it is  
obvious that  
the goals  
cannot be  
reached,  
don't adjust  
the goals,  
adjust the action steps.*  
Confucius

**VISION 21** **Awesome  
Statistics**

The **Vision 21** community  
composting site, opened  
in 2013, has converted  
some **10 tonnes** of garden  
waste into valuable  
compost.

**LANSDOWN  
COMMUNITY  
COMPOSTING**  
**LCCC**

**International  
Year of Soils**

**Paris Agreement -**  
**COP 21** in Paris, on 12 December 2015  
*‘The Paris Agreement central aim is  
to strengthen the global response  
to the threat of climate change by  
keeping a global temperature rise  
this century well below 2 degrees  
Celsius above pre-industrial levels  
and to pursue efforts to limit the  
temperature increase even further  
to 1.5° Celsius.’*

COP21 • CMP11  
**PARIS 2015**  
UN CLIMATE CHANGE CONFERENCE

**VISION 21@25**  
Vision 21 exhibition panel 7 of 12

the first 25 years of action – the next 25 years of action



# 2016

Global population **7.44 billion**

**The Paris Agreement** entered into force on 4 November 2016

## REGENERATION

# 2017

Global population **7.55 billion**

Increased use of **social media**



**1250 followers**



**300+ likes**

**Cheltenham Repair Café**

launches as a venture between **Vision 21**, St Andrew's Church, UniGlos and Gloucestershire's joint waste team



**1,500 repair café's worldwide**

(first one in Amsterdam in October 2009)

*11 sessions a year at St Andrew's Church - using volunteer repairers*

**Green investment** in community-owned **wind farm in South Wales**



**'Shed night' piloted**

**Warmer Cheltenham** information portal receives **£10k grant from Heritage Lottery Fund**

1st team-building trip for volunteers to France and Belgium

Expansion to 24 beds at **Tewkesbury Edible Garden and Allotments Project** completed



**Healthy Hobbies** £10k grant from National Lottery Awards for All to build community cohesion with **Pilates, sew and up-cycle/recycle textiles** and **cooking classes for low income households**



**Repair Café** grows as word of mouth brings in new customers and volunteer repairers

**Vision 21** supports and takes part in Cheltenham's **MidSummer Fiesta**

**Green investment** in South Wales solar farm

**Barack Obama** has warned that climate change could create a refugee crisis that is **'unprecedented in human history.**



**No nation, whether it's large or small, rich or poor, will be immune from the impacts of climate change."** May 2017



**International Year of Pulses**



# WARMER CHELTENHAM



Energy efficiency measures installed in UK housing, such as loft & cavity wall insulation, boiler upgrades, new doors & windows:

<b>2014</b>	<b>780,000</b>
<b>2015</b>	<b>446,000</b>
<b>2016</b>	<b>368,000</b>
<b>2017</b>	<b>202,000</b>
<b>2018</b>	<b>120,000 Estimate</b>
<b>2019</b>	<b>100,000</b>

At this rate it would take **96 years** for the government to reach its own targets to reduce fuel poverty even though it is the cheapest way to cut carbon emissions, according to the charity National Energy Action 2019.



**International Year of Sustainable Tourism for Development**



**4.8GW of battery storage**

in the pipeline, enough capacity to fully charge **480,000 EVs.**



**Awesome Statistics**

**Since 2017 we have seen 18 people 'graduate' from our ranks and move into paid employment.**



**Vision 21 exhibition panel 8 of 12**

*the first 25 years of action – the next 25 years of action*





The world's population has **doubled** since **1970**

**2018**  
Global population **7.6 billion**

**'We have 12 years to limit climate change catastrophe'** warns UN(IPCC)  
**'Urgent changes (needed) to cut risk of extreme heat, drought, floods and poverty'** 8th October 2018

**2019**  
Projected global population **7.74 billion**

**Two-thirds of Britons want faster action on climate, poll finds -**  
The Guardian 19 June 2019

**Vision 21** celebrates **25 years** of sustaining Gloucestershire

**Vision 21 Objectives:**

- **To provide local, voluntary opportunities for people to engage in community-based environmental activities**
- **To educate and encourage the public, businesses and local authorities to become more sustainable**

*In order to maximise our impact, our projects are restricted to the Gloucestershire county boundary and we concentrate our energies and efforts on achieving the following UN Sustainable Development Goals:*

- **Climate Action**
- **Sustainable Communities**
- **Responsible Consumption**
- **Clean Energy**
- **Education**

**Global carbon emissions** a record **37.1bn** tonnes. 😞

**Battery storage** is now supplying electricity from **renewable sources** to the UK National Grid Balancing Mechanism.

**8GW of battery storage** ready to be deployed, enough to fully charge **480,000** EVs.



**Global temperatures** have continued to rise and we are already **1°C above** pre-industrial level.

**Vision 21 Awesome Statistics**

**Since 2016 V21's Repair Café has dealt with over 900 items. Some 745 were repaired, a 79% success rate.**

In the UK, we buy more clothes per person than any other country in Europe – five times what we bought in the 1980s, creating **1.3m tonnes** of waste each year. Some **350,000 tonnes** of this waste is dumped in **landfill** or **incinerated**.



Cities have **doubled in size** since **1992**

Working with other agencies to tackle period poverty in Cheltenham like **UNSTOPPABLE** provides **FREE** sanitary products - additional reason for **Vision 21** taking part is to ensure an element of environmental sustainability is introduced. 😊

When the **FiT** (Feed-in-Tariff) ended in March, the UK had **13,217 MW** of solar capacity across **1,000,473** installations.

**19% of UK electricity** now comes from **wind**, mainly off-shore.

National Grid is spending around **£1.3bn a year** to adapt the grid to run on **renewable energy**, to manage a completely zero-carbon electricity grid by **2025**.

There are currently over **210,000 EVs** on UK roads, however most of them are plug-in hybrids.



Number of **EV charging sites** in the UK outnumbers petrol stations.

**Zero-carbon energy sources** are poised to overtake fossil fuels as the **UK's largest electricity source** over a full calendar year. 😊

**Predicted:** Vehicle-to-grid technology (**V2G**) could solve **10-15%** of the UK's demand for **storage**.

**David Attenborough** does **Glastonbury**. Greenest one yet, as **no plastic bottles sold** (compared to 1 million in previous year).

**Impacts of fast fashion:**

**26.7kg UK consumption of new clothing per head** (highest in Europe)  
**235m items of clothing sent to landfill** (in 2014)  
*Enviro Audit Committee Submissions*



**Refuse  
Reduce  
Repair  
Reuse  
Recycle**





We have a maximum of 12 years to act from 2019 - otherwise we risk unfettered temperature rises around the globe

2020  
Projected global population 8 billion

The need for action has rarely been clearer. Our message to government is simple: 'Now do it!'



a return flight from London to Sydney melts 18.9 m<sup>2</sup> of Arctic ice



Less rainfall could **reduce agriculture yields** by up to **50%** in some parts of the world. (IPCC)

**Battery storage** is planned to expand from **0.7GW** in 2019 to **3GW** in 2020

**World leaders** come together to protect **30% our oceans** with a **Global Oceans Treaty** for **2030**

**UK Treasury** proposes to raise VAT from **5%** to **20%** on **home solar-battery systems**, while the tax on coal will stay at **5%**  
Juliet Davenport, Good Energy's chief executive, said the rise was **'possibly the worst way to respond to a climate emergency.'**

**UK Gov to spend £2bn** to encourage people to **walk, cycle** and use **public transport** more

Average UK weekly household spend on **transport**:  
**car £55, public transport £28**

#### #LET THEM #BEE

*Rudolf Steiner, predicted in 1923 that if humanity continued to cultivate the honeybees by artificial means, we would witness the mass disappearance of the bees within 80 years. Steiner warned against both meddling with the natural process of hive society and artificially manipulating of queen bees.*

Rudolf Steiner 1861-1925

*Aviation is to cap net aviation CO<sub>2</sub> emissions from 2020 (carbon-neutral growth). A reduction in net aviation CO<sub>2</sub> emissions of 50% by 2050, (relative to 2005 levels) is proposed*



*In terms of environmental degradation, the textile industry creates 1.2bn tonnes of CO<sub>2</sub> a year, more than international aviation & shipping combined. It consumes lake-sized volumes of water and creates chemical and plastic pollution – as much as 35% of microplastics found in the ocean come from synthetic clothing.*

#### We need a whole new way of thinking:

*In the global north the immediate differences may not be very striking. But we need to rapidly remove all fossil fuels from our everyday life and leave them in the ground. This is what most politicians do not seem to understand. Lowering emissions is not enough. In the global south, however, people already are very much affected. There is an ongoing catastrophe in many parts of the world. And this is already affecting hundreds of millions. There will of course be lots of benefits to changing to a green economy. But we must remember that this is above all an emergency – not primarily an opportunity to create new green economic growth.*

Greta Thunberg 2019



Gloucestershire local plans to have new enforceable policies for **zero carbon developments** and sites for **solar** and **wind**.

**Low carbon retrofit plan** for heritage buildings, all housing and businesses

#### VISION 21 Awesome Statistics

**In the 25 years since we opened our doors, an estimated 25,000 people have been helped by V21 and its projects.**



VISION 21 @ 25

Vision 21 exhibition panel 1 of 12  
the first 25 years of action – the next 25 years of action



2025

2030

Projected global population  
8.25 billion



**Ecological footprint comparison in hectares:**  
Average size  
UK dog 0.84  
Citizen of  
Vietnam 0.76  
Citizen of  
Ethiopia 0.67.  
The New Scientist 2009

UK's **National Grid** should now be **zero carbon**.  
(Predicted - 2019)

The UK's last coal-fired power station should have closed by now

THERE IS A  
**93%**  
CHANCE THAT  
GLOBAL  
WARMING  
WILL EXCEED  
**4°C**  
BY THE END OF  
THIS CENTURY.

Warming temperatures will cause temperate glaciers on equatorial mountains in Africa to disappear.

Up to **18%** of the world's coral reefs are likely to be lost as a result of climate change and other environmental stresses. In Asian coastal waters, the coral loss could reach **30%** (IPCC).

All but one of the UK's existing nuclear plants should now have been decommissioned. Only one new nuclear plant – Hinkley Point C in Somerset – is currently being built.

Some **1GW** of onshore windfarms could be retired. These need to be repowered with new turbines or their output replaced.

**15GW** of gas-fired power stations built before 2000 likely to have been retired.

To meet the UK's climate goals, gas generation has to decline from **40%** of the mix in 2019 down to **25%**.

**33%** (at least) of UK electricity has to come from off-shore wind to meet UK government targets.

In 2016 at UN Heads of Governments agreed to achieve sustainable development goals by 2030: 'We reaffirm our unwavering commitment to achieving all 17 Sustainable Development Goals and all 169 targets.' This agenda is a **PLAN OF ACTION** for people, planet and prosperity.

EU target for renewable energy **32%** (previous target 27%). Actual was **17%** in 2016.



**1 in 15 homes** in Gloucestershire to have **solar PV panels**

**Fuel poverty** eradicated from all homes below an **EPC D rating**

All new homes meeting **zero carbon** & **smart energy** standards

*'Much of the impact of climate change will be felt through changing patterns of water availability, with shrinking glaciers and changing patterns of precipitation increasing the likelihood of drought and flood. If climate change is the shark, then water is its teeth and it is an issue on which businesses need far greater levels of awareness and understanding.'*  
CDP Water Disclosure Project, CEO, Paul Dickinson 2009

**Climate change** has the potential to tip out of balance the relatively stable climate in which civilization has been built and jeopardise the security of water, food and energy systems.





# 2040

Projected global population  
8.85 billion

The top 20 warmest years on record have come since 1995.

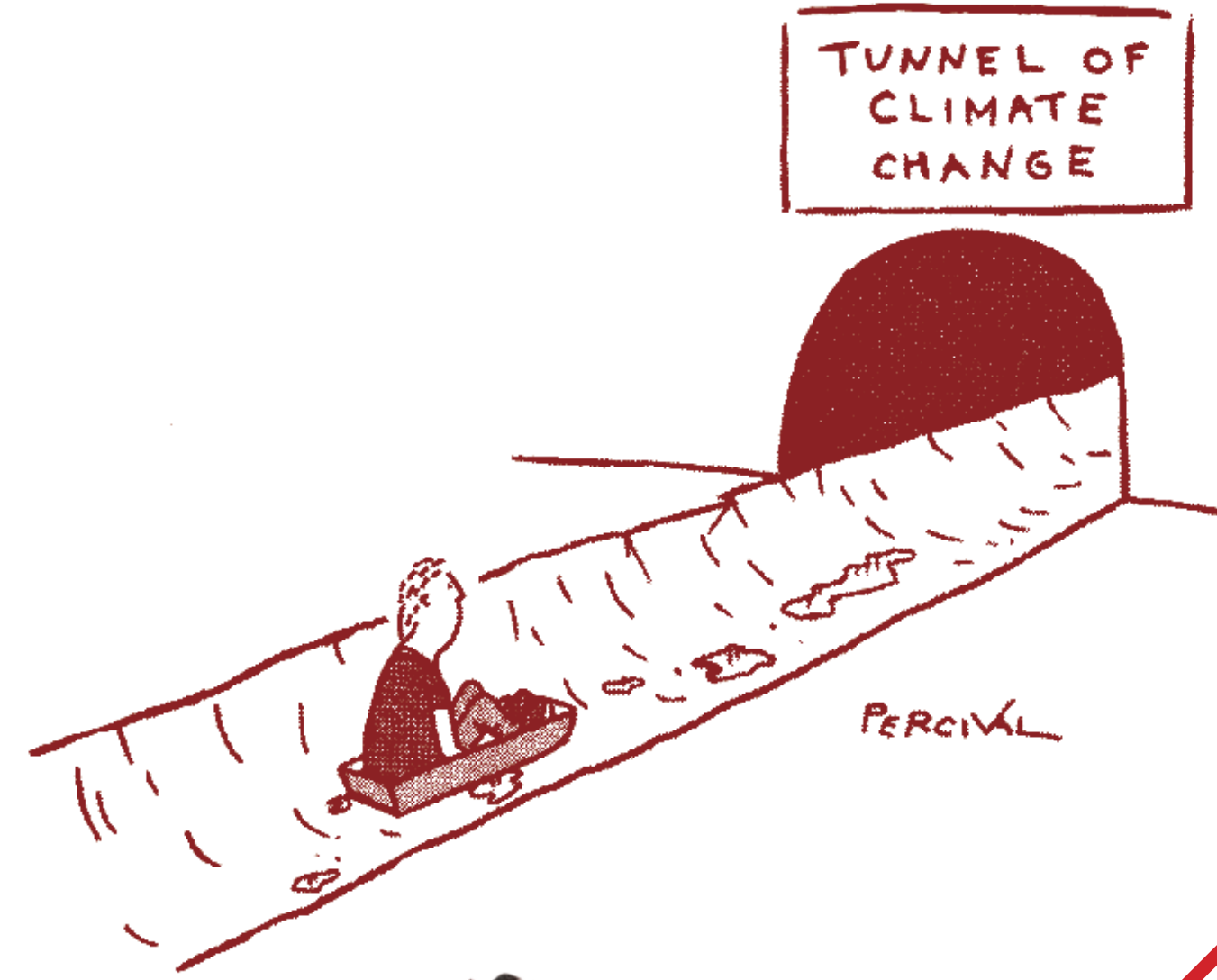
**Projected: Most 'meat' will not come from slaughtered animals. 35% will be 'meat' replacements grown in vats & 25% plant-based vegan products.**

**By now Ocean acidification is likely to have killed off most coral reefs.**

**Use of coal as an electricity source should now be ZERO.**

**Renewable energy should now account for 70% of electricity generation** (20% in 2020).

**Projected: 36m EV's in UK - about 90% of total vehicles.**



By three methods we may learn wisdom: first, by reflection, which is noblest; second, by imitation, which is easiest; and third by experience, which is the bitterest.  
Confucius

# 2050

Projected global population  
9.35 billion



**As biodiversity hotspots are more threatened, a quarter of the world's plant and vertebrate animal species could face extinction.**

**UK should have 75GW electricity from off-shore wind.**



**Earth's enormous masses of ice are melting fast. By 2050, over 800 million people are at risk from the impacts of rising seas and storm surges.**



**Agriculture is currently responsible for about 9% of the UK's greenhouse gas emissions, mostly from methane. The National Farmers' Union (NFU), which represents 55,000 UK farmers, has set a target of net-zero emissions in UK farming by 2040.**



HELP ME!

'Those who have the privilege to know have a duty to act.'

Albert Einstein



the first 25 years of action – the next 25 years of action