Shropshire Council

Climate Change Guide for Communities

Contents

Introduction

Sustainability, as defined by the Sustainable Development Commission; is to enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life, without compromising the quality of life of future generations. This will be pursued in an integrated way through a sustainable, innovative and productive economy that delivers high levels of employment; and a just society that promotes social inclusion, sustainable communities and personal wellbeing. This will be done in ways that protect and enhance the physical and natural environment, and use resources and energy as efficiently as possible"
www.sd-commission.org.uk/pages/what-is-sustainable-development.html

This guide is designed to support communities to become more sustainable. Sustainability is much broader than environmental issues and has economic and social aspects. This guide will help inspire individuals and organisations working within communities to take action and provide practical measures and steps that can be taken. This guide provides an overview of the measures and actions that can be taken, tips and case studies are provided as well as links for further information and who should be approached for support.

This guide will help communities work towards:

- living within environmental limits, protecting limited natural resources and limiting climate change (environmental sustainability)
- stimulating strong, healthy communities and a just society (social sustainability)
- building a strong, stable economy (economic sustainability)

Figure 1 Diagram showing the pillars of sustainability

Shropshire Council has acknowledged that Climate Change is a significant threat globally and locally and has identified it as a key challenge to be addressed. Priority 2 of the Shropshire Community Strategy is responding to climate change, and enhancing our natural and built environment. It says that Shropshire Council will be recognised as a leader in responding to climate change. The Council will work with communities to prepare for and adapt to the issues that climate change may bring and ensure the rich varied environment is valued, protected and enhanced. Natural resources, waste and water will be managed efficiently and Shropshire will adapt its needs to meet the changing demands of the climate.

Climate Change: Key Messages, Facts and Figures

"Climate Change will affect Shropshire and impact on residents, communities, businesses and visitors to the County. It requires everyone to work together to mitigate and adapt to ensure a more resilient future for all"

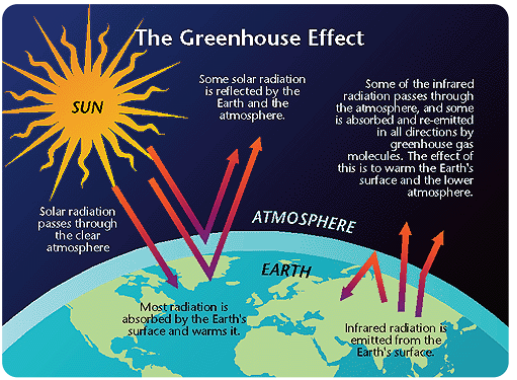
Shropshire Council Sustainability, Environment and Climate Change Strategy

Overview

Climate change has been acknowledged as one of the greatest threats globally and locally and, whilst the actual impact can only be predicted, it is known that to maintain a level of existence that we have become accustomed to, we need to mitigate against further effects and more importantly adapt to future climates. Sustainability means enabling community development to happen within environmental limits and takes into account community aspirations; considering the wider impact on not only the natural environment and biodiversity, but the way people live in, and use the environment for social and economic gains.

Greenhouse gases surround the earth trapping some of the suns heat keeping the temperature at around 15°C. However, today there are indications that increased human activity (through burning of fossil fuels) is increasing the rate and magnitude of climate changes through the increase in emissions of man-made greenhouse gases such as carbon dioxide and methane.

Figure 2 **Diagram explaining the greenhouse effect**



Since the industrial revolution human activities have resulted in an increase in greenhouse gases, which has led to an average surface temperature increase of 0.74°C and 0.4°C since the 1970's. At present just over 7 billion tonnes of CO_2 is emitted globally each year through fossil fuels and an additional 1.6 billion tonnes through land use change including deforestation.

Key Statistics

- Carbon dioxide levels in the atmosphere are now 380ppm
- Sea levels have risen by 12-22cm during the 20th Century
- The growing season in the UK is increasing in length with earlier onset of spring

Twin Responses to Climate Change

Changes in global climates for the next 30 years are already set to happen due to the greenhouse gases already emitted. Change after that point can only be limited by reducing

emissions now. To become resilient to inevitable changes in the medium term it is going to be essential to adapt to these forecast changes.

- **Mitigation of climate change**

  Actions to reduce/slow down global warming by reducing greenhouse gas emissions to the atmosphere

- **Adaptation to climate change**

  Responding to the predicted impacts of unavoidable climate change – long term planning for inevitable change due to current emissions

What Does Climate Change Mean For Shropshire?

In Shropshire, long term climate change trends mean hotter, drier summers and milder wetter winters and an increase in extreme events across the seasons, including intense rainfall, extreme cold and heat waves. The extremity of change is expected to depend on future levels of emissions of climate change gases. The more that is done now to reduce emissions, the less extreme the expected impact in the future.

http://ukclimateprojections.defra.gov.uk/content/view/390/499/

Shropshire's climate is expected to change in several ways; predictions include:

- Average annual maximum temperatures are expected to rise by 4°C by 2080 (uncertainty 2°C – 6°C). Most of the warming is expected to be in the summer with around 4.7°C increase in summer warming (uncertainty 1.3°C – 7.5°C), although daily maximums could be around 6.6°C by 2080 (uncertainty 2.9°C – 11.3°C). Winter warming although not as high as summer increases may still be around 3.4°C by 2080 (uncertainty 1.4°C –5.2°C).

- Summer rainfall by 2080's is expected to decrease by 25% (uncertainty 51% decrease – 4% increase). Winter rainfall by 2080 is expected to increase by 24% (uncertainty 6% - 51% increase).

- More short duration extreme weather events such as storms and floods.

How Will Climate Change Affect Life In Shropshire?

The environment of Shropshire is vulnerable to a changing climate therefore the communities in Shropshire are also vulnerable. Shropshire's economy is dependant on agriculture, rural industry and tourism, industries reliant on the existing climate. Ensuring communities are increasingly resilient to the impacts of climate change and become more sustainable is important in Shropshire to mitigate future changes whilst preparing for future changes.

The table below highlights some of the issues that may arise in a changing climate with examples of how they have already provided a cause for concern for Shropshire Council.

Theme	**Issues**	**Examples**
Homes and Buildings	Higher fuel costs Higher insurance premiums for flood risk properties Increasing use of roofs for energy generation	January 2007 Storms – building damage and loss of communications – building closures.
Travel and Transport	Increased occurrences of travel disruption through flooding, fallen trees, melted roads / buckled train tracks.	July 2007 Flooding (pluvial and fluvial) leading to bridge loss, road closures, landslides and delays in works.
Health and Wellbeing	Increased summer deaths from heat and pollution related illnesses Increased occurrences of food poisoning, sun burn and skin cancer	August 2003 Heat wave – 900 additional deaths over average in UK.
Leisure and Culture	Increased demand for local tourism from improved summer climate	August 2001 Heat wave – the hottest bank holiday weekend for 10 years leading to increased visitor numbers at popular tourist attractions but mass traffic disruption.
Our Environment	Loss of vulnerable habitats and species Longer growing season supporting changing biodiversity	July 2003 Heat wave – Haughmond Hill experienced 14 fires in grass, undergrowth and straw.

Does It Really Matter To Me?

It is important to realise that climate change in not just something to be tackled by "climate change" interest groups and enthusiastic individuals. Increasing the County's resilience to climate change will be best dealt with if everyone gets involved. This does not mean you need to be investing large sums of money or making significant changes to your way of life to start to implement change. It is important the groups and individuals realise that although climate change may not be a priority to their groups' aims it is likely to link with some of the activities that you are involved with and to ensure your groups' resilience to any future changes in the climate it is important to realise how it does link with your groups' priorities.

Some of the key reasons for making changes can be seen below

- Saving money – reducing energy bills through behaviour change, investing in more efficient technology or installing renewable energy systems will all save money long term.
- Protecting the environment – making changes that use less energy, purchases that are produced by sustainable methods, getting involved in conservation activity all help to preserve the natural environment.
- Better for your health – choosing to walk or cycle or to eat local or organic food will ensure you are healthier but also that you have less impact on the environment.
- Ensuring a future for the next generation – many people with children and families want their children to enjoy the lifestyles and activities they have and realise this is an important motivator for change.
- It's the right thing to do – some people will have strong ethical and moral values and by highlighting the importance will realise that any contributions they can make are significant.

However these are all reasons that require people to want to make a change and give the impression it may be additional to what they already do or do not fit directly with their club / groups aims. The following are reasons which question why you should not be making these changes.

- It's easy – many activities that are promoted in this guide require some behaviour change but do not ask for significant lifestyle changes
- It's quicker – very often to make a change does not take long and can help you save time, using public transport particularly in rush hour, using telephone conferencing, visiting local attractions will all free up time previously spent travelling.
- It's cheaper – if you are saving energy, fuel and time, then you are saving money on items you "have" to buy anyway.
- It's fun – meeting new people or trying new activities can give you a good sense of achievement and you may enjoy an activity you have never done before.
- Making simple changes can fit in with what we already do, often requiring very little effort.

www.decc.gov.uk/ The Department of Energy and Climate Change (DECC) was created to bring together energy policy and climate change mitigation policy.

www.defra.gov.uk/environment/climate/ Department for Environment, Food and Rural Affiars is responsible for a number of policy areas which are associated with greenhouse gas emissions.

www.theccc.org.uk/ The Committee on Climate Change is an independent body established under the Climate Change Act (2008). They advise the UK Government on setting and meeting carbon.

www.ipcc.ch/index.htm The Intergovernmental Panel on Climate Change is the international body for the assessment of climate change.

www.ukcip.org.uk/ The UK Climate Impacts Programme helps organisations to adapt to inevitable climate change.

www.metoffice.gov.uk/climate-change The UK National weather and climate change service.

www.2shrop.net/2shropnet/AToZOfMini-sites/S/ShropshirePartnership/CommunityStrategy Shropshire Partnership Community Strategy

www.shropshire.gov.uk/sustainability.nsf/ Shropshire Climate Change Strategy and Shropshire Local Climate Impact Profile

Third Sector Declaration On Climate Change

The purpose of the Declaration is to make a public statement that will make a contribution to reducing the negative impacts of climate change, and create a framework for change by Third Sector organisations. The Declaration explains the reasons why all Third Sector organisations, regardless of their mission and vision or how they define their organisation, should act now on climate change. It recognises that climate change is not only about the environment. It can have positive and negative impacts on our ability to support a prosperous and fair society. It commits organisations to a number of practical actions to promote leadership and collaboration in tackling and preparing for climate change.

Sign up. Act up. Speak up.

Everyone has a right to a clean and healthy environment. We know that climate change is a major challenge to this right, ours and future generations'. Climate change is not only about the environment. It can have positive and negative impacts on our ability to support a prosperous and fair society. Climate change projections continue to show that the UK will increasingly suffer from climate change and that it will also have a massive negative impact on the poor in this country and others around the world. So we need to mitigate and adapt to the impacts of climate change now.

There can be no excuses for doing nothing. We need to just act.

- Climate change will bring around one of the greatest social, environmental and economic threats to society. Issues such as health, housing, transport, waste, food production and equality will all be affected by the impacts of climate change such as flooding or more extreme weather events
- Injustice, poverty, exclusion and disadvantage all reduce the ability of countries, communities, families and individuals to respond positively to that challenge

- Reducing our carbon emissions enough to avoid the worst impacts of climate change will require a transformation in our economy and society, and it's essential that this transition to a low carbon future is fair and equitable

For those reasons we accept that we must:

- Act on climate change because it is inextricably bound to our work on environmental and social justice
- Commit to taking positive steps to reduce any negative impacts we may have on climate change
- Partnerships; work with our partners to communicate inspiring and effective initiatives
- Help to create or support progressive national policies
- Reduce the worst impacts of climate change for the most vulnerable people in society
- Strengthen as well as build our organisation's, or group's resilience to climate change
- Adapt our services, projects and campaigns to ensure that the people we work with and for, act on and are resilient to climate change

To achieve social, economic and environmental benefits of tackling climate change, we commit our organisation, group or project to a sustained, comprehensive and accountable response to the challenge of climate change whilst encouraging similar action amongst those we work with.

www.justact.org.uk/declaration/introduction/

Can My Group Get Involved?

Many groups exist in communities and most of them when questioned about climate change would not realise that it either meant anything to their group or that they could or should do anything about it. However all groups do have an impact from their everyday activities on climate change and a wide range of simple changes can be made to help reduce this impact and ensure these organisations are more resilient to changes in the climate in the future.

Most clubs have key members who help to drive the club forward and whom the rest of the club respect for making the correct decisions – these "change champions" are key to helping you implement some of these suggestions in to your club or group.
If you can enthuse them about your idea then they will be able to help you spread the message.

"At my sports club we now car share to matches and tournaments, saving on fuel and parking costs as well as saving carbon"

"At a recent coffee morning we had a Fairtrade tea and coffee tasting session and we now only serve Fairtrade tea and coffee which tastes great and supports ethical trading"

"We have a rota for making sure all equipment and lights are turned off at the end of each meeting, helping to ensure our room hire costs are not increased whilst saving energy"

"At our AGMs we always have food and this year we have decided to all bring something we have bought locally"

"We wanted to encourage more people from the local community to get involved with our event so everyone who turned up on foot or bike received free entry to our event and because they did not have to pay more people came along"

"When booking training venues we think about how people are going to get there – is it easy to get public transport"

"Previously our day trips involved tourist destinations but on the suggestion of one of our members we thought we would go to a local nature reserve instead and found the range of wildlife in our local area amazing and there was no long journey before we got there meaning more people could come along"

"We realised that as a club we wanted some more publicity for ourselves to attract new members and decided a clean up would be a good way to become recognised in the local community and give something back"

"Rather than having lots or organisational meetings we now use phone conferencing once a month to keep up to date with key business – this is much quicker than previous meetings and means that we have more time to socialise when we meet up"

Figure 3
Sample community group comments about getting involved with climate change

National Considerations

The UK government has placed an emphasis on local authorities setting a leading example on Climate Change. Action by local authorities will be critical to the achievements of the Government's climate change objectives, such as the long term goal to reduce CO_2 emissions. However, for an effective response to climate change a coordinated approach is required, involving public and private sector organisations as well as the local communities and individuals.

UK Climate Change Act The key provision of the 2008 Act is setting of legally binding targets to reduce greenhouse gas emissions, aiming to tackle climate change.

- 34% reduction in greenhouse gas emissions by 2020 (from 1990 levels)
- 80% reduction in greenhouse gas emissions by 2050 (from 1990 levels)

Current progress is 22% in green house gas reduction between 1990 and 2008 **www.decc.gov.uk/en/content/cms/what_we_do/lc_uk/carbon_budgets/carbonbudgets.aspx**

The **Energy Act 2010** implements some of the key measures required to deliver DECC's low carbon agenda. It includes provisions on delivering a new financial incentive for carbon capture and storage, implementing mandatory social price support, and introducing a package of measures aimed at ensuring that the energy markets are working fairly for consumers and delivering secure and sustainable energy supplies.

The **Energy Security and Green Economy Bill 2011** is designed to provide for a step change in the provision of energy efficiency measures to homes and businesses, and make improvements to our framework to enable and secure, low carbon energy supplies and fair competition in the energy markets. These provisions include: A new financing framework to enable the provision of energy

efficiency measures to all householders and private landlords, funded by a charge on energy bills in order to avoid paying upfront costs. Powers to create a new Energy Company Obligation to take over from the existing obligation to reduce carbon emissions (Carbon Emissions Reduction Target), which expires at the end of 2012. The new obligation will be designed to work alongside the Green Deal finance offer, and target appropriate measures at those households which are likely to need additional support, in particular those containing vulnerable people on low incomes and those in hard to treat housing.

www.decc.gov.uk/en/content/cms/legislation/energybill/energybill.aspx

The **UK Low Carbon Transition Plan** plots how the UK will meet the 34 percent cut in emissions on 1990 levels by 2020. The Plan shows how reductions in the power sector and heavy industry; transport; homes and communities; workplaces and jobs; and farming, land and waste sectors could enable carbon budgets to 2022 to be met.

www.decc.gov.uk/en/content/cms/what_we_do/lc_uk/lctrans_plan/lctrans_plan.aspx

The recently published **Localism Bill** aims to give communities powers to save local assets threatened with closure by allowing them to bid for the ownership and management of community assets. The Bill will radically reform the planning system to give local people new rights to shape the development of the communities in which they live.

www.communities.gov.uk/documents/localgovernment/pdf/1793908.pdf

Working In Partnership

Shropshire Council understands the need for partnership working and community involvement to address the issues presented by climate change. The Shropshire Community Strategy Priority 2 is Responding to climate change, and enhancing our natural and built environment

Shropshire's aspiration is that: Shropshire will be recognised as a leader in responding to climate change.

We will work with communities to prepare for and adapt to the issues that climate change may bring and ensure the rich varied environment is valued, protected and enhanced. Natural resources, waste and water will be managed efficiently and we will adapt our needs to meet the changing demands of the climate.

1. Shropshire has a lower carbon footprint, inspired and implemented through community leadership
2. Our rich and varied natural and built environment and heritage is protected and enhanced, balanced by innovative thinking in design, build and technology
3. Our streets are clean, the roads are maintained and there are accessible areas of the countryside and green open spaces
4. Our natural resources are managed sustainably, and the generation and landfilling of waste is reduced.

A **Sustainable Communities Steering Board** has been established to monitor and ensure these aspirations are met. It includes a wide representation of organisations Shropshire Council representatives for waste, environment, economy and housing as well as representatives from English Heritage, Environment Agency, Community Sector, Advantage West Midlands, and Housing Associations, with the ability to call on further specialists if needed.

The **Environmental Delivery Group** is chaired by the Environment Agency to identify community priorities that will meet the aspirations of the Strategy.

The **Shropshire Low Carbon Community Network** is managed by Shropshire Council to ensure communication, provide training and share information between the groups in Shropshire working on this agenda and to ensure their voice and concerns are communicated to the Environment Delivery Group.

What Can We Do With Community Buildings?

Community buildings across Shropshire vary in age, style and use. However most would benefit from interventions that would both help to address climate change issues as well as saving money in the running of the building and making them a more thermally comfortable venue.

The **Feed-In Tariffs** (FITs) are a new Government-backed measure to make it worth your while to produce renewable electricity. There are three ways that the tariffs help you make money from generating your own energy:

1. A payment for all the electricity you produce
2. An additional bonus payment if you export it into the grid
3. For any energy you produce and use yourself, you will reduce your electricity bill

Eligible technologies include:

- Anaerobic digestion to produce biogas for electricity generation
- Hydro-electric power
- Solar electric photovoltaics (PV)
- Wind power
- Small-scale gas-powered combined heat and power up to 2kW

The generation tarrif is a fixed price for every kilowatt hour of electricity you generate and use in your property, prices vary on technology used from 5 pence / kWh to 41 pence / kWh.

www.energysavingtrust.org.uk/Generate-your-own-energy/Sell-your-own-energy/Feed-in-Tariff-scheme

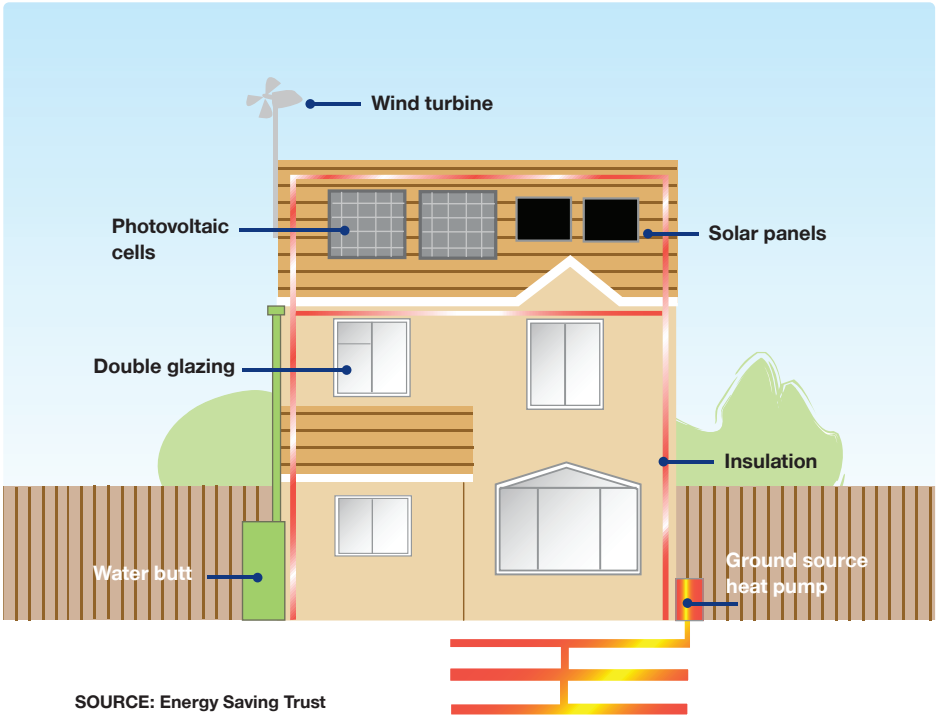
The Renewable Heat Incentive (RHI) is designed to provide financial support that encourages individuals, communities and businesses to switch from using fossil fuel for heating, to renewable technologies such as wood fuel. This scheme is due to commence for non domestic buildings in Autumn 2011 with domestic buildings following in October 2012.

Potential eligible technologies may include:

- Air, water and ground-source heat pumps
- Solar thermal
- Biomass boilers
- Renewable combined heat and power
- Use of biogas and bioliquids
- Injection of biomethane into the natural gas grid

Tariff levels will be calculated to bridge the financial gap between the cost of conventional and renewable heat systems at all scales, with additional compensation for certain technologies for an element of the non-financial cost.

www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/renewable/policy/renewableheat/incentive/incentive.aspx



SOURCE: Energy Saving Trust

The table below looks at a range of options that could be implemented in buildings, at various stages in a buildings lifecycle. When considering any works on a building the

Intervention	Details
Energy Efficiency	
Smart Monitoring	A device that records electricity (and gas and water) consumption so anomalies can be identified
Timer switches	Programmable controls for electrical equipment such as photocopiers, printers, some vending machines
Self closing devices on doors	Automatically close reducing heat loss
Energy efficiency lighting	Used up to 80% less than standard bulbs
Lighting controls and sensors	Help maintain lighting levels and minimise consumption
Sun pipes	Diverts natural daylight into a room
Efficient heating and thermal comfort	
Energy efficient boiler	Replace old boiler with new efficient model
Zone heating	Zoning enable the areas in use to be heated
Heating controls, thermostatic valves	Fitted to radiators, or boiler controls for efficient control of areas in use
Reflective radiator foil	Fitted behind radiators to reflect heat back into room
Insulating pipes values and tanks	Prevents heat loss
Loft insulation	Reduces heat loss, most levels can be increased
Cavity wall insulation	Insulation in wall cavities to reduce heat loss
Solid wall insulation	Insulation on interior or exterior of wall
Windows	
Draught proofing windows and doors	Insulation tape and sealant around doors and windows
Double glazing / secondary glazing	Additional glazing reduces heat loss from windows
Thick curtains / thermal blinds	Can significantly reduce heat loss and equally regulate temperatures when hot

following should be considered as alternatives to existing systems, and to see if they can be integrated in to new designs or maintenance.

(Estimated payback details from Energy Savings Trust and Carbon Trust).

Recommended For	Notes	Estimated Payback
Understanding energy use	Data can usually be linked through website so users can view consumption	Information tool but savings can be significant
Things that do not need to be left on	Ability to programme on 7 day and 24 hour timers	6 months - 3 years
All external doors		6 months - 2 years
Replace all bulbs	Range of different sizes, shapes and colours are available	1 - 3 years
Multi use rooms where lights are left on	Occupancy, light levels, movement sensors are options	4 - 5 years
Poorly lit spaces reducing the need for electric lighting	Can be retrofitted	Variable
When replacement is needed	Savings can be made upgrading and by changing fuel type	10+ years dependant on size and fuel
Sites that need to heat different areas, e.g. out of hours areas	Can be retro fitted	4-5 years
Enables better control	Can't be used on old single pipe heating systems	1-3 years
Any radiators	Most effective when used on external walls	6 months – 1 year
All pipes		1-2 years
	Loft hatches should also be insulated	3-4 years
	Mineral wool, recycled paper or sheep's wool used	3-4 years
Many older properties do not have cavities	Advice should be sought, appropriate style and material	varies
Poorly fitting doors and windows and single glazing	Inexpensive and easy to fit	2-3 years
Single glazed windows or old double glazing	Advice should be sought for older buildings with traditional windows	10+ years
Poorly fitting doors and windows and single glazing	Inexpensive and easy to fit	2-3 years

Intervention	Details
Water Efficiency	
"hippo" or "save-a-flush"	Water displacement device for the toilet cistern reducing the volume of water
Dual flush toilet / slimline toilet	Dual flush give the option of short or long flush. Slimline toilets only use 4.5 litres
Urinal controls and single flush controls	Detect and control water flow based on use. Single flush are based on pressure using only 1.5l of water
Waterless urinals	Use no water, may need chemicals
Push taps	Flow stops after a set time to prevent water wastage
Tap sprays / aerators / flow restrictor	Can save 50% water use
Renewable Energy Options (may be eligible for FIT – Feed in Tariff or RHI – Renewable Heat Incentive)	
Solar photovoltaic panels (PV)	Converts sunlight in to electricity
Solar water heating	Uses sunlight to heat water
Wind Turbine	Generates electricity from wind
Ground Source Heat Pump	
Biomass and biofuel	CO_2 emitted is balanced by that absorbed during growth.

	Recommended For	Notes	Estimated Payback
	For older toilets (before 1999) with flush of more than 9 litres		2-6 months
	Replacing older toilets	Older toilets use 9 litres per flush	7-10 years
		Range of controls available, regular checks needed	1 year (controls) 5-7 years (single flush)
		Cleaning, inspection, maintenance	6 months – 5 years
	Most sites		2-4 years
	Most sites	Regular inspection	18 months – 3 years
	South facing, not over shadowed roofs	Panels can be installed free standing	Varies
	South facing with demand for hot water	Demand in summer makes installation more appropriate	Varies
	Windy open aspect	Planning issues must be considered	Varies
	Under floor heating	Best in new builds but can be retrofitted	Varies
	Change of heating system or high demand	Good accessibility and storage is required for fuel	Varies

Raising Awareness

Communicating the issues of climate change is a challenge for all involved. However the role of education and awareness is essential to ensure we have the capacity to deal with changes through responsible living and provide the skills and training to adapt.

What Can Communities Do?

The next section provides information on a number of key themes giving suggestions for community involvement at an individual or neighbourhood level.

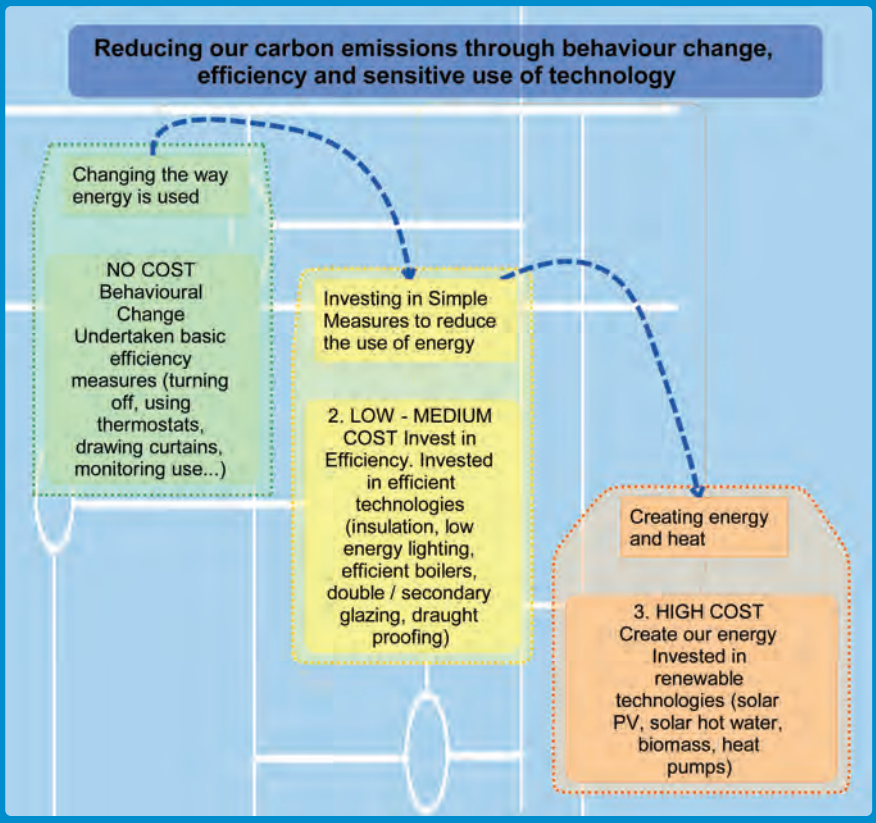


Figure 4 Diagram highlighting the route communities, groups and individuals should take to reduce carbon emissions

Energy & Heating

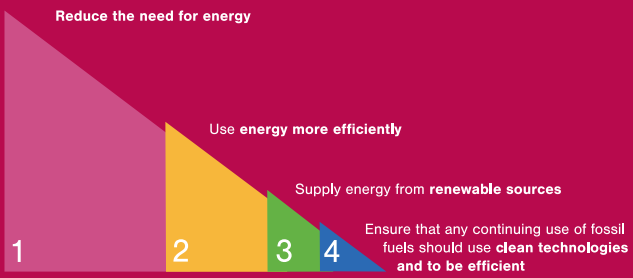
Key Messages

Reducing energy demand will help make financial savings as well as reduce emissions. Supplies of fossil fuels are finite and many UK power stations are reaching the end of their lives; alternative energy supplies need to be investigated to provide energy security and meet UK emissions targets.

What Is The Issue?

Buildings account for approximately 40% of our overall emissions in the UK and over half of this is from non domestic buildings. Tackling this issue needs to take into account the energy hierarchy to achieve the best results.

Figure 5 The energy hierarchy



This highlights that it is most important to change our behaviour and use resources more sparingly before looking to use renewable energy, if none of the previous are possible then the final option should be to ensure that any fossil fuels being used are done so using clean and efficient technologies.

What Can A Community Do?

By following the energy hierarchy communities can make significant savings in personal and community building energy demands. Many of suggestions have little cost or short pay back periods and the introduction of Feed-In-Tariffs and the forthcoming Renewable Heat Incentive make the more expensive renewable energy options more attractive.

The first approach to take is to **reduce the need for energy** use by

- **Monitoring your energy use**; Increases your awareness and can identify potential savings.
- **Lighting**; switching off lights and making better use of natural daylight.
- **Heating**; using doors and windows effectively to improve natural ventilation, keep the building cool and warm when needed, to reduce the reliance on artificial heat and cooling. More effective control through thermostats - set at 16° - 20°C (at least 18°C if elderly and infirm). Ensure furniture is not placed in front of heaters and radiators to allow heat to disperse effectively in the room. Closing curtains and blinds at dusk, enabling rooms to maintain a constant temperature, preventing heat loss through windows equally they can regulate temperature during hot periods.
- **Equipment**; switching off equipment when not in use and over night. Not leaving items on standby or chargers plugged in when not in use. Plan ahead – full loads on washing machines, dishwashers and batch baking is more efficient.
- **Water**; standard showers use less water and energy than baths, but a 5 minute power shower can use more energy and water than a bath. Use the timer and set the thermostat to 60^0C. Less energy is consumed if water is only heated when needed.

The second stage is to consider how the energy can be **used more efficiently**

- **Lighting**; replacing incandescent bulbs with LED or CFL bulbs can make up to 75% savings on lighting costs.
- **Thicker Curtains and Shutters**; the main source of draughts is from badly fitting windows and doors. By placing a barrier across the window or door will help to retain heat in the room and reduce energy loss.
- **Draught-proofing**; this is a simple measure to improve energy efficiency and retain thermal stability in a room. Sealing gaps around windows and doors can make a significant difference. Unused open chimneys and flues can be partially sealed reducing draughts but sufficient ventilation should be left to allow the flue

to remain dry. Solid wall buildings do need some circulation of air to allow evaporation of moisture to prevent condensation and mould growth, however, natural or mechanical ventilation can be added in rooms such as bathrooms or kitchens where there is likely to be build up of water vapour.

- **Double glazing / secondary glazing**; additional glazing reduces heat loss from windows. Single glazed windows or old double glazing can benefit. Advice should be sought for older buildings with traditional windows.
- When choosing **new appliances** look for the energy rating, A or A+ appliances will reduce your energy use especially on items used regularly.
- **Newer A++ boilers** can increase the efficiency of heating systems to 90% (maximum efficiency); condensing boilers can provide higher efficiency than combi boilers but may not always be appropriate. Servicing and maintaining heating systems will help preserve the efficiency. Ensuring hot water cylinders and pipes have appropriate insulation can help with heat retention. Thermostatic radiator valves and thermostats ensure that heat is being directed to the appropriate places in a building. Thermal insulation (reflector panels) behind radiators helps to direct heat.
- **Insulation** is one of the most effective ways to prevent energy wastage within a building. It ensures that heat loss is minimised and therefore helps to maximise energy efficiency. Important areas to insulate include the roof, walls and floors, in addition to internal fittings such as pipes and water storage tanks.

Once energy demand has been reduced and baseline energy use has been determined then **renewable energy options** should be considered

- **Solar thermal** heating systems use energy from the sun to heat water for central heating and hot water demand.
- **Solar photovoltaic** (PV) panels are semi-conductor panels that convert sunlight directly into electricity.

- **Wind** turbines convert the kinetic energy from the wind into mechanical energy which is then used to drive a generator that converts this energy into electricity.
- **Biomass** is a general term used to describe organic matter and can be derived from a range of sources including forestry operations or coppice, agricultural residue, high yield crops, food waste and some forms of industrial waste. Biomass can be burnt directly to generate heat for hot water production and space heating.
- **Ground source heat pumps** make use of the natural heat capacity in the soil to provide heating and cooling to buildings. The temperature just 2 metres down into the earth in Britain is roughly constant all year round at 12^{0}C. This will be warmer than the surface air temperature in winter and cooler in summer. A ground source heat pump harnesses this heat to provide heating or cooling for buildings.
- **Combined Heat and Power** is the simultaneous production of electricity and usable heat from a single generating plant. Conventional electricity generation is extremely inefficient as only a small part of the input energy is converted into electricity (typically 25-35%). The remaining 65-75% comprises heat as a waste product. A CHP system uses this waste heat for heating (or cooling via a heat exchange).

Case Study - Kinnerley Parish Hall

As part of the Shropshire Low Carbon Communities Programme, Kinnerley Parish Hall has already initiated lifetime savings of over 6 tonnes of carbon dioxide through making the switch to low energy light bulbs. It is having additional cavity wall insulation and draught-proofing installed which will save an additional 875 kg of carbon dioxide per annum and 35 tonnes over the measures' typical lives.

Savings	Annual CO_2 savings	% of total annual CO_2	Lifetime CO_2 Savings	Annual cost savings	Payback period (approx.)
Lighting	1.0t	53%	6.4t	£233	3 months
Cavity wall insulation and draught proofing	0.9t	47%	35t	£126	6 years

Case Study - Much Wenlock Carbon - Efficient LED Christmas Lights

Until 2009, strings of incandescent bulbs were hung in the Town Square and along the lower half of the High St. 860 bulbs consumed a total of 6370kW over an average 49 day Christmas period, at a cost of £828 (based on 13p per kW). In 2010 the Town and community groups wanted to change these to more efficient LED lights and a total of £7400 was raised from grants, parish funds and local business contributions.

	No. of lights	Energy consumption	Annual energy saving	49 day running costs	Annual cost saving	Annual CO_2 production	Annual CO_2 saving
Pre 2010 bulbs	860 bulbs	6370kW	5988kW	£828.10	£778.44	2.4 tonnes	2.2 tonnes (92%)
2010 - LEDs	18 LED braids + 10 LED spheres	382kW		£49.66		0.2 tonnes	

Table 1. Actual Figures

www.energysavingtrust.org.uk 0800 512 012 The Energy Saving Trust is a non-profit organisation that provides free and impartial advice on how to stop wasting energy

www.carbontrust.co.uk
The Carbon Trust is a not-for-profit company with the mission to move to a low carbon economy

www.mea.org.uk
Marches Energy Agency is one of the UK's leading sustainable energy and climate change organisations and an independent, registered charity

www.keepshropshirewarm.org/ 01743 277123 **info@keepshropshirewarm.org**
Keep Shropshire Warm alleviating fuel poverty, making affordable warmth a reality

Act on CO2 **http://actonco2.direct.gov.uk/home.html**
Climate Change tips – from using energy saving light bulbs to driving five miles less a week.

Waste & Recycling

Key Messages

Landfill is a major contributor to climate change with methane (gas produced from decaying waste) around 25 times more potent that CO_2. By cutting the amount of waste that ends up in landfill through reuse, recycling and composting we are reducing our greenhouse gas emissions.

What Is The Issue?

In 2009/10 Shropshire Council managed 161,788 tonnes of Municipal Solid Waste (MSW) of which 96% was household waste. Of this nearly 50% was disposed of via landfill, 20% was dry material sent for recycling and 29% was organic matter send for composting / anaerobic digestion and less than 1% was clinical waste send for incineration with energy recovery. The UK currently uses more resources than is sustainable, it would require 3.5 Planet Earths to sustain us if every county consumed the same as us.

The waste hierarchy is a list of approaches to managing waste to preserve community resources and is arranged in order of the most desirable option to the least desirable option.

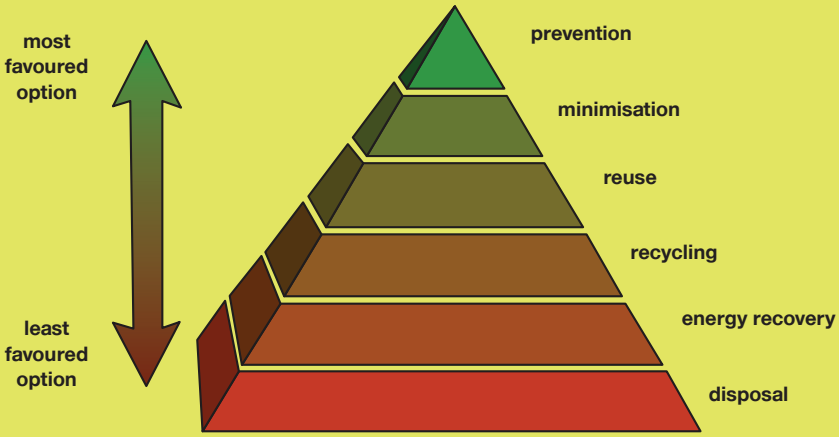


Figure 6 The waste hierarchy

What Can A Community Do?

Encouraging individuals and communities to follow the waste hierarchy can help to conserve natural resources and reduce carbon emissions.

Reduce the volume of waste created through prevention and minimisation

- Avoid products which create excess waste in the first place
- Reduce food waste by buying only as much as you need
- Reduce packing – take your own reusable bag when you go shopping and avoid heavily packaged items
- Stop junk mail – by registering with the Mailing Preference Service.
- Use re-usable boxes for packed lunches and storage of food in the fridge, rather than foil or cling film.
- Consider buying in bulk to minimise packaging waste.

Reuse products to ensure maximum lifecycles are realised from products

- Repair – fix it don't bin it.
- Donate, sell or buy second hand, through groups such as freecycle, local boot sales or on ebay.
- Good quality second hand furniture can be donated to local furniture sharing schemes and then reused by those on lower incomes.

Recycle products that have reached the end of their useful life

- Ensure waste is segregated and paper, plastics, cans, glass, cardboard are recycled.
- Encourage composting of garden and food waste.
- Buy products packaged in material that can be reused or recycled.

Case Study - Bridgnorth Furniture Store Shropshire

The Bridgnorth Furniture Store is a non-profit community group where you can get good quality used furniture and second hand household items. The store is open to anybody, although based in Bridgnorth it supports local areas including Kidderminster, Bewdley and Stourport. It can provide a range of essential home items including sofas, beds, wardrobes, white goods, kitchen equipment. Similar schemes also exist in other main towns in Shropshire.

Case Study - Scrappies

The Shropshire Children's Scrapstore Recycling & Resource Centre and Scraptastic Scrappies function is to collect worthwhile scrap and to sort it, use it, make things with it, pass it on, or sell it to members, who in turn use it for the benefit and education of children.

www.shropshire.gov.uk/waste.nsf Information from Shropshire Council on waste and recycling.

www.freecycle.org/ **www.freegle.org.uk/**
Freecycle/Freegle - A grassroots movement to enable people to give and reuse "stuff" for free.

www.recyclenow.com Information on what, how and where you can recycle. 0845 331 3131

www.wrap.org.uk Help businesses reduce waste, develop sustainable products and use resources in an efficient way.

www.lovefoodhatewaste.com/shropshire Shropshire Waste Partnership supports this campaign to protect the environment and save money.

Scrappies **www.scrappies.org/**

Mailing preference Service 0845 703 4599 **www.mpsonline.org.uk** Register to stop unwanted mail and reduce waste.

www.scrl.org.uk/ Shropshire Community Recycling exists to help its members minimize waste and maximize the use of resources

Shropshire Household Furniture Recycling Scheme (SHOFUR) Tel: 01691679817
www.shropshire.gov.uk/waste.nsf/open/9450c1fe11a8293580256c9100507654

Shropshire Community Wood Recycling 01939 235701 **SCWoodrecycling@googlemail.com**

Water

Key Messages

- Water is not as abundant in England and Wales as you would think. We only have 1,334 cubic metres (m^3) per person a year – much less than France (3,065 m^3) or even the hotter Mediterranean countries of Italy (2,785 m^3) and Spain (2,775 m^3).
- The key to water efficiency is reducing waste, not restricting use. About 1/3rd of the water each person uses on a daily basis is wasted – it runs straight down the plughole or down the toilet without being used, this water then has to be cleaned and treated with the sewage systems.
- Using water, especially hot water, also uses energy and increases emissions of greenhouse gases contributing to climate change. Heating water in homes for cooking, personal washing and cleaning produces 5% of the UK's greenhouse gas emissions and a quarter of CO_2 emissions from homes.

What Is The Issue?

Climate change may affect our water supply. Current scenarios predict that Shropshire will have drier summers and wetter winters. This could mean droughts in the summer and floods in the winter.

Flooding – Shropshire is particularly vulnerable to flooding; caused by rivers and streams as well as surface runoff. Wetter winters and increases in extreme events will increase Shropshire's vulnerability.

Drought – Shropshire is dependant on agriculture and uses water heavily for irrigation, higher temperatures will increase water consumption during periods when rainfall will be less. To adapt to climate change rainfall needs to be captured for use during drought periods.

Water demand - The average person in England and Wales uses 150 litres of water a day. An average UK family uses about 500 litres of water per day, which results in more than 1.5 tonnes of carbon escaping into the atmosphere every year. By 2020, with increasing population and housing growth the demand for water could increase by 5% - that's 800 million extra litres of water a day. Most of the water is used for washing and toilet flushing, but it also includes drinking, cooking, car washing and watering the garden.

Future Water, the Government's water strategy for England, outlines a vision for the average person to reduce the water they use by 20 litres per day (to 130 litres a day). Water is embedded in the products that we drink and on average we actually use 3400 litres through agricultural crops, 1095 litres through manufactured products and 150 litres in the home. Therefore re-using and recycling products will not only reduce waste but also save water.

What Can A Community Do?

Water is a finite resource, to reduce the volume of water and reduce its impact for climate change we need to waste less water, limit the water we send for treatment unnecessarily and find alternative sources of water. All new projects, activities and developments need to consider the effect of water use and identify ways where water use can be reduced.

Waste less water

- Put a 'save a flush' in single flush toilets, an average household can save 3,500 litres a year per toilet.
- Don't leave taps running, use a washing up bowl.
- Fix leaking taps – one dripping tap can waste at least 5,500 litres of water a year.
- Install water saving taps and toilets.
- Ensure you know where main stop valves are and make sure that you can turn it on and off. If ever a pipe bursts, you'll know how to cut off the flow.

Recycle water

- Save the water from your washing up and once cooled reuse it to water plants.
- Collect rain water in a water butt from buildings to which can then be reused for watering plants.

Divert Water from Drains

- Appropriate planting – canopy planting, ground cover planting.
- Reed bed systems.
- Underground storage tanks.
- Permeable surfaces when redesigning parking to prevent runoff from car parks.

Case Study - Shrewsbury Household Recycling Centre

The facility includes a number of measures to minimise its effect on the environment and its surroundings. Rainwater is harvested and used for toilet flushing and wash down facilities, resulting in a further CO_2 saving. The facility has been designed using Sustainable Urban Drainage Systems (SUDS) to mitigate any impact on an adjacent watercourse using a storm water balancing pond, interceptors, buried storm water attenuation tanks and a constructed wetland which houses Great Crested Newts.

www.waterwise.org.uk/ Waterwise is a UK NGO focused on decreasing water consumption in the UK and building the evidence base for large scale water efficiency. The leading authority on water efficiency in the UK.

www.stwater.co.uk/ Severn Trent Water offer water saving tips and devices.

www.environment-agency.gov.uk/ Government Agency proving information on environmental issues, including flooding.

www.ofwat.gov.uk/ Ofwat (The Water Services Regulation Authority) is the economic regulator of the water and sewerage sectors in England and Wales

Case Study - Water Saving in Shropshire Schools

In 2009 schools with the highest water usage were included as part of a Water Efficiency Programme which was been set up by Severn Trent Water (STW) and being delivered by Aqualogic in order to monitor the effect of water efficiency improvements on overall consumption. An initial assessment of bills and audit of the premise took place and recommendations were made and a range of products installed in to the schools.

Bridgnorth Endowed Secondary School was given a range of recommendations including upgrades, save-a-flushes and push taps.
Cost of installation was around £750 (based on their water use a payback period of under 4 months).

Pre-install consumption	7694m^3/year
Pre-install pupil consumption	7.3m^3/year
Post-install consumption	6563m^3/year
Post-install pupil consumption	6.2m^3/year
Total Savings (water)	1130m^3/year
Total Savings (£)	£2419/year
Total savings (%)	14.7%

Mary Webb Secondary School recommendations included upgraded cisterns, save-a-flushes, push taps and inline restrictors. The cost of installation was around £2000, with a payback of around 10 months.

Pre-install consumption	3866m^3/year
Pre-install pupil consumption	6.7m^3/year
Post-install consumption	2739m^3/year
Post-install pupil consumption	4.7m^3/year
Total Savings (water)	1127m^3/year
Total Savings (£)	£2412/year

Even small primary schools such as **Hopton Wafers** were still able to demonstrate improvements and savings. Save-a-flushes and an upgrade to one of the toilets as well as push taps and aerators gave a cost of installation at £193 with a payback period of 29 months.

Pre-install consumption	194m^3/year
Pre-install pupil consumption	6.7m^3/year
Post-install consumption	157m^3/year
Post-install pupil consumption	5.4m^3/year
Total Savings (water)	37m^3/year
Total Savings (£)	£80/year
Total savings (%)	19.2%

These are predicted figures based on information gathered during the survey and standard usage figures, they may differ from actual figures.
Cost of water £2.14/m^3

Transport

Key Messages

30% of Shropshire's carbon emissions are from transport, almost all from road based travel, around two thirds of road transport carbon emissions are from passenger cars, just under a third from vans and HGV's, and only a very small amount from buses. Shropshire is a rural county and is dependant on its transport network to sustain quality of life.

What Is The Issue?

Transport is responsible for nearly a quarter of man-made gas emissions in the UK, as well as being a significant contributing factor to poor air quality in towns and cities. Road transport and associated emissions have continued to rise and are predicted to grow by a further 33% in the next 20 years.

What Can A Community Do?

The easiest way to reduce emissions from transport is to minimise them from the outset. In 2008 nearly a quarter of all car trips were shorter than 2 miles in length (DfT National Travel Survey 2008). Improving pedestrian and cycle paths and safety, access and cycle storage is an important way to encourage residents to make behaviour changes. Reducing the number and length of journeys in rural communities should enhance the benefits for local businesses, facilities, services and employment.

When considering projects the travel involved should be considered:

- Is the journey necessary? Is it possible to use email, telephone or video-conferencing instead? Can it be postponed or combined with an additional journey?
- Is it possible to walk or cycle? How close is it to participants and what facilities are you able to offer, cycle parking, showers?
- Is it possible to travel by public transport? Can I arrange meetings/events around arrival/departure times? Can routes and times be provided?
- Is it possible to car share? Encouraging people to contact each other for sharing journeys.

- If car use is essential, encourage the take up of more efficient vehicles, both traditional and alternative fuel types.
- Promoting more efficient driving practices, and sustainable driver training.

Case Study - Walking for Health scheme

The Walking for Health initiative is part of a nationally recognised scheme and is accredited by Natural England and supported by the Shropshire Primary Care Trust. Funding has been provided by Sport England. A typical beginner's walk would last no longer than forty minutes and be on level ground.

Email: walkingforhealth@shropshire.gov.uk

Case study – Qube Oswestry – Transport to ART Project

Oswestry Community Action and Shropshire Council Arts Service are working in partnership to provide accessible/affordable transport in Northern Shropshire to enable people who don't have access to transport to participate in a wide range of arts events, such as drama, music, poetry, dance and visual arts.

Specifically targeting the council's four priority groups:

- young people up to the age of 23
- older people over 60
- people living in rural isolation
- people with a disability.

tART transport to ART

www.shropshire.gov.uk/traveltransport.nsf To find out more information on travel and transport in Shropshire follow this link.

www.liftshare.com/uk/ Find someone travelling your way so you can share your journey – saving money, cutting your carbon footprint and having fun!

www.cycleshrewsbury.co.uk/ Cycle Shrewsbury is the campaign that Shropshire Council is running with the cycling town funding, £1.8 million of grant funding from the Department for Transport over the next three years.

www.sustrans.org.uk A leading UK charity enabling people to travel by foot, bike or public transport for more of the journeys we make every day.

Sustainable Shopping

Key messages

A fifth of our climate change emissions are related to the production, processing, transportation and storage of food. Shropshire is a rural county dependant on agriculture; it supports a number of food producers, providing a wide range of food products from vegetables and meat through to processed products.

What Is The Issue?

The Ecological Footprint estimates the demand of human activities on nature. It calculates how much productive land and sea is needed to provide the energy, food and materials we use in our everyday lives, and how much land is required to absorb our waste. It also calculates the emissions generated from the oil, coal and gas we burn, and determines how much land is required to absorb these emissions. When all global hectares of bio productive land and sea are divided by the total global population, it leaves only 1.8gha/ capita. The Ecological Footprint shows Shropshire to have a 5.58gha/capita. This is higher than regional and national averages of 5.36gha/capita and 5.4gha/capita. To sustain the current levels of production and consumption in the UK, on a global scale, three planets would be required. The highest contributor to this footprint is the food and drink sector, contributing to around 21.3% of the Ecological footprint for Shropshire.

"Sustainable procurement is the process of acquiring goods works and services from a supplier that provides the optimum combination of whole life costs and benefits not only to meet the customers needs but also to society and the economy whilst minimising damage to the environment"

Purchasing decisions should take into account;

- price
- environmental impacts
- ethical and social impacts on local and global economies

"Studies have shown that every £10 spent with a local business generates £25 for the local economy compared to £14 for every £10 spent in a non local food business such as a supermarket"

Plugging The Leaks New Economics Foundation 2001

Shopping locally for many of the every day products we buy like fresh meat, bread, milk and seasonally for fruits & vegetables help to reduce carbon emissions through lowering food miles and also helping to support our local businesses. Exotic and even common varieties of vegetables and fruit to ensure year round supply are routinely imported by air contributing to greenhouse gas emissions. Issues of animal welfare, genetically modified foods, avoidance of endangered species, assurance of quality and ethical and fairly traded products are all important considerations.

What Can A Community Do?

In Shropshire there is a range of ways in which sourcing sustainably can be done at community level.

- Try to identify the origin of your food – this will give you a better understanding of any food miles, production methods and assurances associated with the product.
- Growing your own food in gardens and allotments gives the most control but is not practicable for everyone. Local produce is often the next best thing and Shropshire produces a wide range of food stuffs. Local farm shops and farmers markets can be found across Shropshire and offer good access to local food at reasonable prices.
- Box schemes can also be a convenient way of accessing local food if you are unable to reach a local shop or market.
- Supermarkets are increasingly offering local produce so check the label for origin and authenticity.
- Buying free range and organic produce offers a more robust standard and better quality of foods. Producers will often try to minimize the level of artificial fertilisers and pesticides involved in the production process.

- Fair Trade and other sustainable assurance schemes offer products often not availably locally (such as sugar, coffee, tea and chocolate) which have been produced to higher standards and ensure ethical trading for the producer, supporting often developing global economies.
- Raising awareness around local food outlets in your locality through schools, community centres and health centres will help to widen its appeal.
- It should also be encouraged when shopping use reusable shopping bags, helping to reduce waste.

Case Study - New Community Orchard, Morda, Oswestry

Over 20 varieties of fruit trees have recently been planted as part of a new community orchard at Morda, near Oswestry. The community orchard will cover about half an acre, and comprise of a mix of fruit trees including rare apple varieties, pears and Shropshire Damson. The small piece of land where the orchard will be planted was part of the housing development on Old Mapsis Way and has until now been maintained as grassland. After discussions with local residents to determine the future of the open space, it was decided that a community orchard should be planted on the site. A local orchard expert will be taking a leading role in the project to advise and supply the trees.

Case Study – Shropshire Farmers Markets

Farmers Markets are an excellent outlet for a range local produce from small scale farmers and food producers, the food and drink sold has been produced within 30 miles (and often much closer). By buying local you support less intensive farming, which is better for the countryside, as well as dramatically reducing the number of food miles and supporting your local economy and because it is sold by someone involved in the production they can answer your questions about growing methods or ingredients.

Case Study – Ludlow Food Centre

The Ludlow Food Centre is a unique food shopping experience where farming, food production and retailing infuse together to create a very special environment. The Food Centre has 8 production kitchens, a spacious food hall and a conference centre.

80% of the food sold in the Food Centre comes from Shropshire and the surrounding counties of Worcestershire, Herefordshire and Powys. These counties, which are represented by our diamond logo, produce an abundance of fresh, seasonal food that is full of flavour. The Food Centre is designed to not only sell food but to produce it and 50% of the Food Centre products are made on the premises in kitchen units that surround the food hall. These are visible through glass windows that allow you to see artisan producers actually making your food.

www.wwf.org.uk Ecological footprinting through the WWF Network, an environmental organisation, working with governments, businesses and communities in the UK and around the world so that people and nature thrive within their fair share of the planet's natural resources.

www.shropshirehills-buylocal.co.uk/ This website aims to help narrow the gap between producers, processors and consumers. By providing a searchable directory on where you can source local produce and relevant background information.

www.soilassociation.org/ Promote planet-friendly food and farming through education, campaigns and community programmes.

www.fairtrade.org.uk/ **www.shropshire-fairtrade.org.uk/** The Fairtrade Foundation is the independent non-profit organisation that licenses use of the FAIRTRADE Mark on products in the UK in accordance with internationally agreed Fairtrade standards.

www.madeinshropshire.co.uk/ Made in Shropshire is a collaboration of artists, designer- makers and food producers who live or work in Shropshire.

Food Box Schemes **www.eatshrewsbury.co.uk/box_schemes.php** Details of all the veg, meat and fish box schemes available in Shropshire.

http://www.ruralhubswm.org.uk/shropshire_farmers_markets Shropshire Rural Hub and details of Farmers Markets in Shropshire

Community Sustainability Checklist / Project Appraisal

To ensure sustainable development in communities and projects that offer community wide benefits, all grants should be appraised taking note of sustainability criteria to ensure they offer social, economic and environmental benefits to the community.

This list can also be used when applying for grants to ensure key areas are covered.

Projects which can demonstrate a wider knowledge of community issues and can show some understanding of the principles of sustainability are often projects which are more successful in the long term.

- **Environmental benefits** may be conservation and wildlife related activity or it may be awareness raising or reducing the overall impact of the project on the environment.
- **Social benefits** may be anything from providing volunteering opportunities, involving various sectors of the community, raising awareness, or providing additional amenities in the community.
- **Economic benefits** may be bringing finances in to the community and local businesses, it may be employment or training, or it may be helping the community save money.

Depending on the appraisal criteria already identified you may be able to consider the following points / questions when looking at grant schemes.

Sustainability Appraisal

Not all projects will be able to give strong answers to all questions. However it is important to demonstrate a willingness to find out more about the issues, consider alternatives and strive towards higher standards of sustainability.

- How does it fit with other community projects, action plans?
- Has a similar project demonstrated benefits elsewhere or are there lessons to be learnt?
- Ensure the overall effects on waste production, energy consumption and water usage are factored into the decision making process.
- Check that the decision does not conflict with existing energy, water, waste or recycling initiatives or environment policies.
- Ensure long-term plans and strategies support carbon reduction activity beyond 2011, in line with UK-wide carbon reduction targets to 2050.
- Factor future prices of energy, water, waste disposal and carbon credits into the decision making process.
- Consider putting energy efficiency and waste minimisation obligations on suppliers and contractors.

Environmental

Please highlight the environmental benefits your project will bring to the community.

- How will the project aim to increase positive benefits to habitats, species and landscape and minimise negative effects? Is there evidence of conservation work, habitat management, reinstating traditional practices?
- How will the project raise environmental awareness?
- 'Reduce, re-use, recycle' - is there evidence of segregated waste management?
- Is there evidence of energy reduction or use of renewable technologies?
- How does it minimise pollution – evidence of limiting pollutants to air/water/land?
- Evidence of traditional, local or natural materials such as wood, slate or local stone is likely to enhance the aesthetic appeal of any building project.
- Sustainable transport - evidence of reducing car use and promoting use of public transport, walking and cycling.

Social and Community Participation

- Has the need for the project been identified by the local community and have local people been involved in developing the proposal? How and who will it benefit?
- Does it support community needs such as the provision of services or amenities, health issues, opportunities for young people, the elderly, and disadvantaged or minority groups?
- How will the project provide or improve local amenities or services or contribute to quality of life?
- Are young people involved in project formulation, implementation or as beneficiaries?
- Consider how energy, water and waste minimisation practices will need to be promoted to members and stakeholders. Is there a training need?

Economic

- How will the project improve peoples' skills or build capacity for future work?
- Does the project use locally sourced goods or services?
- Does it generate its own income - a resource, service or activity for which there is a demand and a willingness to pay, providing long-term sustainability?
- Will the project create or support paid or voluntary jobs, and training opportunities?
- How does it demonstrate value for money?
- Does it lever in other funds/support in kind from other sources, giving a greater input in to the areas?
- Assess the whole life impact of goods and materials to ensure sustainable and long lasting choices.

Community Environmental / Sustainability / Climate Change Groups

Bishops Castle Wasteless Society	www.wasteless.co.uk, Email : info@wasteless.org.uk
Church Stretton Climate Care	www.strettonclimatecare.org.uk, Email: info@strettonclimatecare.org.uk
Cleobury Country	http://pages.cleoburycountry.com/cmef Email: whdpathways@btopenworld.com
Farm Carbon	www.farm-carbon.org/index.html Email: davel@farm-carbon.org
Green Shropshire	www.greenshropshire.org.uk Email: greenshropshire@yahoo.co.uk
Lightfoot Household Energy Service	www.h-e-s.org info@h-e-s.org
Ludlow 21	www.ludlow21.org.uk Email: coordinator@ludlow21.org.uk
Oswestry Agenda 21	www.oswestry21.com Email: os21group@yahoo.com
Rea Valley Environmental Network	www.reaven.org.uk Email: info@reaven.org.uk
Shrewsbury Friends of the Earth	www.shrewsfoe.org.uk Email: judith@shrewsfoe.org.uk
Shropshire Community Recycling Ltd	www.scrl.org.uk
Shropshire Green Drinks	www.greendrinks.org/Shropshire/Shropshire
Shropshire Low Carbon Communities Network	www.shropshire.gov.uk/sustainability.nsf Email: sustainability@shropshire.gov.uk
Sustainable Bridgnorth	Email: bobensum@hotmail.com
Sustainable Wenlock	www.sustainablewenlock.org.uk/ Email: info@sustainablewenlock.org.uk
Transition Town Shrewsbury	www.transitiontownshrewsbury.org.uk/ Email: info@transitiontownshrewsbury.org.uk
Wem Transition Towns	www.wemlocal.org.uk
We Save Online Energy Monitoring	www.wesave.org.uk/enter.php Email: simon@mea.org.uk

For professional advice:
http://carbonleapfrog.org/journal/frequently-asked-questions-faqs.html
Carbon Leapfrog is a UK charity providing free professional support for activity by the voluntary sector with the primary purpose of accelerating the reduction of carbon emissions.

Notes

Notes

Printed on recycled paper

Shropshire Council

All enquiries should be directed to:

Sustainability
Shirehall, Abbey Forgate
Shrewsbury
Shropshire SY2 6ND
Tel: 01743 255662
www.shropshire.gov.uk/sustainability.nsf
email: sustainability@shropshire.gov.uk

If you can read this but know someone who can't, please contact us on 0345 678 9000 so we can provide this information in a more suitable format.