

# **SUSTAINABLE DEVELOPMENT & LIVING ENVIRONMENT TEAM**

## **Annual Report 2011/12**

### **Introduction**

Sustainable development is one of the central principles guiding the work of Caerphilly County Borough Council. The Community Strategy provides the overarching, fifteen year, vision of a sustainable county borough, with the Authority's commitment and contribution to this shared partnership vision set out in "Living Better, Using Less" the Authority's Sustainable Development Strategy.

This report highlights the work of the Sustainable Development & Living Environment Team in 2011/12. The Team works in partnership with the Sustainable Development Advisory Panel (Members Panel), Sustainable Development Core Group (Officers Group), Rural Development Plan Team and the Living Environment Partnership. It should be noted that this report does not seek to identify all sustainable projects throughout the Authority, but identifies areas where the Sustainable Development Team, Core Group or Sustainable Development Advisory Panel (SDAP) have been involved. It is part of the role of these 3 groups to provide support and to promote a culture where sustainable projects can develop with or without their direct support.

The Sustainable Development & Living Environment Team contributes to the objectives set out in the following Council strategies:

- Corporate Improvement Plan
- "Living Better, Using Less", the Council's Sustainable Development Strategy 2008.
- Carbon Reduction Strategy
- Corporate Travel Plan
- Planning Division Service Improvement Plan

The work also contributes to the objectives set out in the following partnership strategies:

- Caerphilly County Borough Community Strategy
- Caerphilly County Borough Living Environment Strategy
- Caerphilly County Borough Education for Sustainable Development & Global Citizenship (ESDGC) Strategy
- Rural Development Plan

The work of the Team is divided under the following four headings:

- Sustainable Council
- Education for Sustainable Development
- The Living Environment
- Rural Development Programme, Sustainable Energy

This Annual Report is structured to reflect these areas of work.

## **Executive Summary**

The Sustainable Development & Living Environment Team continues to raise awareness of the key sustainable development issues, which affect the Authority, and to implement projects designed to improve the sustainability of the Authority.

During 2011/12 the Team has undertaken joint projects and given specific support to 7 Services including Planning, ICT, Procurement and Housing.

The Education for Sustainable Development work continues to go from strength to strength, demonstrating the benefit of employing a dedicated ESD Officer. Fifty-three of the 91 schools in the county borough have now achieved Green Flag status under the Eco Schools scheme.

The Team continues to co-ordinate the Living Environment Partnership, one of the themes of the Community Strategy, ensuring that we maximise the benefits of working in partnership on environmental issues.

In April 2011 the Team expanded with the recruitment of two officers to deliver the Sustainable Energy element of the Rural Development Plan (RDP). This work includes raising awareness of sustainable energy and climate change issues with farms and rural businesses in the eligible rural wards.

### **Some key achievements in 2011/12 include:**

- In July the Authority signed the Welsh Government's Sustainable Development Charter, confirming our commitment to making sustainable development our central organising principle, and to promoting and delivering wellbeing through our decisions and operations
- Greenhill Primary School, the county borough's newest school, achieved an Energy Performance Certificate (EPC) rating score of A+, which no other school in the UK has been able to achieve to date
- Over 58% of our schools have achieved a Green Flag (the highest award) under the Eco Schools programme. One school has achieved the coveted Eco Schools Platinum Award.
- 241 Multi function printers (MFPs) have been deployed across the Authority to consolidate local printers, scanners and fax machines onto single devices these have replaced some 1,300 individual devices and saved 4.3m sheets of paper by printing double-sided.
- A Pedometer Challenge was run across the Authority to promote more active lifestyles. In total 727 employees took part, and collectively they walked 2.5 times around the world in the 5 week challenge
- 3,489 residents of the county borough have signed a pledge to combat climate change
- The council was awarded the Welsh Government/Sewta backed All Wales Travel Plan Award at Gold Level, a scheme introduced to recognise best practice in sustainable travel planning.

- The council has recently established a new Salary Sacrifice Car Scheme. 123 vehicles have been ordered via the scheme. On average the new vehicle has resulted in a 35% reduction in CO<sub>2</sub> emissions compared to the vehicle it replaced.
- In the first half-year 57% of waste collected was reused, recycled or composted continuing the Authority's excellent performance in this area.
- The Green Grin o meter, a children's version of the Caerphilly Sustainability Index was launched in both Welsh and English. It looks at the children's ecological footprint, happiness and health.
- The SD Team secured a total of £161,641 funding for projects in 2011/12.

## Sustainable Council

The Council has had a long commitment to sustainability and approved its first sustainable development policy in 1997. It has successively built on this foundation, culminating in the publication of its 2008 **Sustainable Development Strategy, *Living Better, Using Less***, which sets out the approach that the Authority is taking to sustainable development and our vision for a sustainable county borough. It sets out our strategy for tackling the issues and explains how we will manage and monitor the process and how we will report on progress.

The **Council's Corporate Improvement Plan** identifies the priorities that the Council has set. One of the Council's eight Improvement objectives is "**Reducing our carbon footprint and improving our sustainability**". The priorities identified against the objective are to:

- A. Reduce CO<sub>2</sub> emissions from our buildings and street lighting
- B. Reduce the impact of fuel poverty on householders in Caerphilly County Borough by taking advantage of successful funding bids to tackle properties in specific areas of the borough
- C. Raise awareness of climate change issues with our staff and residents of the county borough to enable them to reduce their greenhouse gas emissions
- D. Reduce the impact of our travel and transport to reduce carbon emissions

The work of the SD & LE Team contributes to the **Planning Division's Service Improvement Plan (SIP)**. The Team is responsible for 4 objectives within the SIP:

- To take the lead on sustainability issues within the Council and to promote a better awareness and understanding of sustainable development amongst staff, Members and residents of the County Borough
- To drive the Eco Schools programme in Caerphilly County Borough and to support all schools to enable them to achieve an Eco Schools award.
- To support the Living Environment Partnership and its Working Groups, to enable them to deliver against their respective Community Strategy Objectives, and to support collaborative working with the other thematic Partnerships wherever practicable.
- To lead on the Living Environment Partnership's work on Climate Change, developing a delivery mechanism for the Caerphilly Climate Change Strategy and the roll-out of the Climate Change Commitment.

### Sustainable Development Advisory Panel

The Sustainable Development Advisory Panel (SDAP) was set up in February 2002. It consists of 11 elected members across all political parties. In 2011/12 it was chaired by the Deputy Leader of

the Council. SDAP has a remit to look at any aspect of sustainable development within the Council, or within the wider County Borough, and makes recommendations direct to Cabinet. It is responsible for raising the profile and understanding of sustainable development with Members and officers, to the point that it becomes an automatic part of mainstream decision-making and action.

In its "Improvement Studies Summary Reports" March 2006, the Wales Audit Office identified SDAP as an example of good practice in Wales.

In 2011/12 SDAP met 7 times and received reports on a variety of topics including:

- Energy management and carbon management targets
- Renewable Energy data and implications for the county borough
- Developing woodfuel production and use in SE Wales
- Travel and transport
- Sustainable Development Duties and Responsibilities for Local Authorities
- Waste management

Peter Davies, Climate Change Commissioner for Wales and Sustainable Futures Commissioner for Wales attended the June meeting of SDAP. He addressed the Panel on SD issues in Wales. As part of his visit he went on a short projects tour which included a visit the brand new Greenhill Primary School building has achieved an Energy Performance Certificate (EPC) rating score of A+, which no other school in the UK has been able to achieve to date. Following his visit Peter commented:

***"..... we have a lot of rhetoric in Wales around sustainable development ... but what I've seen today is the practical implementation and that's what is so encouraging. Whenever I've been asked which local authorities are doing a good job on sustainability, Caerphilly is always one of the ones I mention."***

### **Sustainable Development Charter**

In July 2011 Caerphilly County Borough Council signed the Welsh Government's Sustainable Development Charter. The aim of the Charter is to contribute to making Wales a sustainable nation by encouraging organisations to work with the Welsh Government to deliver sustainable development objectives.

By signing the charter, we have committed to make sustainable development our central guiding principle, and will promote and deliver wellbeing through our decisions and operations by:

- ensuring that all decisions promote long term, sustainable wellbeing of people (including employees) and communities;
- ensuring that all decisions take full account of, and where possible fully integrate, the various social, economic and environmental outcomes that are being sought;
- engaging with, and involving, the people and communities that will be affected by these decisions, so that working in partnership for sustainable development becomes part and parcel of the way we work.

## Sustainable Development Strategy 2008, “Living Better, Using Less”

“Living better, using less” sets out the approach that the Authority is taking to sustainable development and our vision for a sustainable county borough. The objectives are:

**Objective 1. To promote longer healthier lives**, with a target of ensuring an average life expectancy for a resident, wherever they live in the county borough, of at least the UK National average by 2030.

**Objective 2. To promote fulfilled and satisfied lives**, with a target of ensuring an average life satisfaction rating for a resident of the county borough of at least the UK national average by 2030.

**Objective 3. To consume less resources**, with a target of ensuring that the average ecological footprint for a resident of the county borough is 2.87 global hectares by 2030 (Based on a target of “one planet living” by 2050)

### Caerphilly Sustainability Index

The complex interaction of these three objectives is at the heart of what the strategy aims to achieve. This interaction can be expressed by the following equation:

$$\text{Living better, using less} = \frac{\text{Long, Healthy Lives X Satisfied Lives}}{\text{Resources Consumed}}$$

Calculated as:

$$\frac{\text{Life expectancy X Life satisfaction}}{\text{Ecological Footprint}}$$

The equation calculates the resource efficiency with which long, healthy and satisfied lives are delivered.

Whilst we need to improve well-being and quality of life (top of the equation) we must do it in a way that reduces the amount of resources we consume (bottom of the equation) to reduce the demand we place on the environment and natural resources.

As part of both the process of explaining and monitoring of the strategy we developed a Caerphilly Sustainability Index (CSI) in 2008, which allows individuals to calculate their own sustainability score. By answering some simple questions individuals are given a score for each of the 3 elements of the equation as well as their overall sustainability score. The on-line version generates a report for each person who completes it, providing tips and sources of further advice, based on their answers. This work, developed in partnership with the New Economics Foundation

(NEF) will hopefully result in action and behaviour change. For further information Visit: [www.sustainablecaerphilly.co.uk](http://www.sustainablecaerphilly.co.uk)

### **National Planning Division of Japan visit**

In December 2011 Sustainability experts from Caerphilly County Borough Council welcomed delegates from the National Planning Division of Japan. The visitors were keen to find out more about Caerphilly's sustainability programme, having been impressed with what they read about the council's activities online.

The delegation included representatives from the National Planning Division and Mitsubishi Research Institute, both based in Japan. They met with officers from the council's Sustainable Development team and Deputy Leader and Cabinet Member for Sustainability, Cllr Colin Mann to find out more about Caerphilly's innovative Sustainability Index.

### **Sustainable Development Website**

The sustainable Caerphilly website encourages people to live a more sustainable lifestyle by Living Better and Using Less. The website has four sections focusing on sustainable living, sustainable schools, sustainable council and sustainable businesses and features an online questionnaire, the Caerphilly Sustainability Index, which allows people to find out how sustainable they really are.

The website, which has recently been revamped promotes six key themes, focusing on buying locally, energy and water, waste minimisation, transport, health and climate change, with links to useful sites and top tips to encourage people to live more sustainably.

### **Sustainable CCBC Intranet Site**

The Sustainable CCBC Intranet site has been designed to encourage staff to live and work more sustainably. The site has six sections focussing on Energy & Water, Health & Lifestyle, Travel and Transport, Procurement, Waste Minimisation and the Green Teams. The site also promotes the authority's salary sacrifice schemes, which include "cycle to work" and "green car" schemes.

### **Pontllanfraith Green Team**

A network of Green Teams was identified as a potential mechanism for further embedding sustainability into the functioning of the Authority, strengthening the implementation of practical action to make the Authority more sustainable, and to increase understanding of sustainability by staff.

The Green Team at Ty Pontllanfraith has continued to demonstrate the benefits to the Green Team approach, particularly in communicating and engaging with staff on sustainability issues. The model has provided a useful mechanism to deliver the objectives of the Carbon Management Plan, Waste management Plan and Travel Plan, and has provided a link for officers whose responsibility it is to implement these plans.

Key achievements and projects that the Green Team had been involved with in 2011/12 include:

- Developing a communications plan

- Establishing an e-brief programme with e mail messages sent to staff to raise awareness of sustainability issues and the work of the Green Team
- Running awareness sessions on energy, waste, travel and health
- Taking an active role in the design and implementation of sustainable landscape work to the central courtyard, including the incorporation of an additional cycle shelter and low maintenance planting
- Investigating the potential for a “green roof” on part of the building
- Running litter picking and tree planting events in the grounds around the building
- Supporting the development of a green travel plan for the building, including inputting into proposed initiatives
- Promoting and rolling out a food waste collection
- Establishing Green Team notice boards

In November 2011 the Pontllanfraith Green Team held a ‘How Green Are You’ event at Pontllanfraith House to raise awareness of sustainable development with staff and to allow staff to meet the members of the Green Team. The event focussed on the work and achievements of the Green Team and included information on energy efficiency, waste minimisation, Fairtrade and sustainable transport along with tree planting and healthy walking activities. Staff also received free bags for life and free soup as part of the event, which was well attended by staff during the lunchtime period.

## **Sustainable Travel**

Travel and transport account for 16% of the UK’s emissions of CO<sub>2</sub>. The Sustainable Development Advisory Panel has identified travel and transport as a key sustainability issue for the Authority to address. The SD & LE Team has been involved in events and projects to raise awareness of the issues and to begin to take practical action to address their impact.

### **All Wales Travel Plan Award**

The SD & LE Team have been working with Sewta over the past few years to incorporate various sustainable transport initiatives into the Authority. As part of this work the council was awarded the Welsh Government backed All Wales Travel Plan Award at Gold Level, a scheme introduced to recognise best practice and excellent commitment to travel planning.

The award was recognition for a variety of sustainable travel initiatives including undertaking a staff travel survey, introducing a staff car share scheme, providing showers, lockers, cycle shelters and pool bikes for staff to use during work and leisure time. The SD & LE Team have also worked to raise awareness and understanding of sustainable travel to staff, introducing a cycle to work scheme and developing sustainable travel plans for the main council buildings.

### **Pontllanfraith Travel Plan Survey**

A formal Travel to Work survey was undertaken in June 2011 at Pontllanfraith House. The Travel Survey was distributed to ~420 staff who work in the building. A total of 208 responses were



received, a response rate of 49.5%. The survey highlighted a number of interesting trends and some potential areas to focus on for improving the sustainability of our staff travel to work.

### **Sustainable Travel Events**

12 events promoting sustainable travel, and highlighting the support and initiatives available to staff to enable them to travel more sustainably were run in 2011/12. Cycle to work salary sacrifice road shows were held at the main council offices and at a selection of leisure centres and schools to promote the scheme to staff.

### **National Bike Week**

National Bike Week (June 16<sup>th</sup> to 24<sup>th</sup> 2011) encouraged staff to leave their cars at home and cycle to work. A variety of events were held during the week including cycle training, electric bike training, sustainable travel events at Penallta House and Pontllanfraith House and a lunchtime mountain bike ride. Forty-five staff who cycled to work during the week were rewarded with a free bike breakfast.

A Commuter Challenge was also held during the week, a race between pushbike, electric bike and car to find out the quickest method to travel between Pontllanfraith House and Penallta House, a distance of 3.8 miles. The race started at 12.30pm from Pontllanfraith and first past the post were the pushbikes completing the journey in 14 and 15 minutes, they were closely followed by the electric bike with a time of 16 minutes, with the car pulling up last taking nearly 18 minutes to complete the journey.

The commuter Challenge highlighted that short journeys can be quicker by bike than by car.

### **Cycle to Work Salary Sacrifice Scheme**

A Cycle to Work Salary Sacrifice Scheme was launched in June 2010 to encourage staff to cycle to work. The tax efficient scheme has been promoted to staff via pay slip flyers, all users email and promotional events held at the main council buildings, schools and leisure centers during 2011/12. To date 221 employees have signed up to the scheme.

### **New cycle shelter at Highways House and Tir Y Berth**

To accommodate the additional cycles due to uptake of the "cycle to work" scheme, additional cycle shelters have been installed at Highways House and Tir Y Berth. The cycle shelters were funded by Sewta, as part of the sustainable travel grant awarded in September 2011 to provide pool bikes and cycle storage facilities for staff.

### **Pool Bike Scheme**

Pontllanfraith House now has 19 pool bikes (14 mountain bikes and 5 electric bikes) for staff to use for leisure purposes during the lunchtime period and after work. Staff can also use the pool bikes for work related journeys for distances within a 4-mile radius of their office, subject to manager's approval.

### **Mileage Allowance for Bikes**

In order to promote the use of cycles in line with the council's health and wellbeing and sustainable development initiatives, a cycle mileage allowance can be claimed where employees use their own bike to undertake their duties. This rate is paid at the prevailing HMRC rate, which is currently £0.20p per mile.

### **Pontllanfraith Staff Mountain Bike Club**

A staff lunchtime mountain bike club has been established to encourage staff based at the Pontllanfraith council offices to improve their health and fitness. The mountain bike club meets weekly on Tuesdays for a local cycle. Cycle routes vary to accommodate new and existing members. Several members of the mountain bike club have confirmed that they have noticed an increase in their health and fitness following participating in regular cycling activities.

### **Carshare scheme**

The SD & Living Environment Team continues to promote the carshare scheme and associated walk budi and cycle budi schemes. A total of 42 dedicated car share spaces have been designated at the 6 main sites. There are currently 293 members of staff registered on the car share scheme.

In order to help the council meet its sustainable development agenda, a car share mileage payment has been introduced for employee's car sharing with other CCBC employees. A payment of £0.05p per mile per passenger, up to the maximum of the seating capacity of the car will be paid for employees using their cars on council business.

### **Green Autos Salary Sacrifice Scheme (GASS)**

In line with its commitment to reducing CO<sub>2</sub> output from vehicles used on business mileage and in commuting to work, the council has recently established a new Salary Sacrifice Car Scheme as part of a government-sponsored initiative to provide a leasing arrangement for low emission cars. The Council believes this is a good way to support employees during these tough economic times and the scheme will also help reduce carbon emissions in line with the authority's sustainability agenda.

This new scheme enables staff to be provided with a new low emission car (CO<sub>2</sub> rating of 120g/km or below) of their choice, fully maintained and insured by the provider. Staff pay for the car under salary sacrifice arrangements through a monthly gross salary deduction, which results in a saving in tax, NI and pension contributions for any employee using the scheme. The Council also makes a contribution of £70 per month to each employee taking part where they are part of the LGPS.

The SD Team has work with HR and Payroll to ensure that systems are in place to capture information on the CO<sub>2</sub> savings achieved by the scheme

In 2011/12, 123 vehicles were ordered via the scheme, 90 have been delivered with 33 outstanding. They cover a wide range of manufacturers. The CO<sub>2</sub> emissions for the vehicles being replaced by the lease cars has resulted in an average saving of 35%. The best individual saving is 62%.

### **Pedometer Challenge**

The CCBC Pedometer Challenge was held from January 30<sup>th</sup> to March 2<sup>nd</sup> 2012, consisting of a baseline week and a four-week challenge, catering for all CCBC employees.

The aims of the challenge were:

- To increase participation in walking
- Educate staff on how many steps they currently undertake on a daily basis
- Promote physical activity and encourage people to be more active, to improve their health and well-being
- Promote the recommended daily steps for an average healthy person, which is 10,000 steps a day, as recommended by the British Heart Foundation

The challenge was a huge success attracting 81 teams and 54 individuals. Teams consisted of between 2 and 40 people, with a total of 727 people participating in the challenge, 8% of the workforce.

The challenge highlighted some key facts including:

- The total distance walked by participants during the five weeks of the challenge was 61,000 miles, approximately 2 ½ times around the world
- The majority of participants do less than the recommended 10,000 steps per day. The average number of steps per participant per day was 6,875, 3,125 steps below the recommended average number
- The average individual increased their weekly steps by 17,575 steps (8 miles) during the challenge
- The average team increased their weekly steps by 113, 012 steps (51 miles) during the challenge
- Each team member of the top team walked an average of 124 miles during the challenge
- The top individual walked approximately 182 miles during the challenge

Following the success of the pedometer challenge the aim is to run an annual challenge to continue to raise awareness and understanding of the health benefits associated with walking to staff.

## **Fairtrade**

### **Fairtrade / Climate Change Event**

The SD & LE Team provide support to the Caerphilly Fairtrade group on a regular basis. In December 2011 the group raised awareness of Fairtrade and Climate Change with a big bag giveaway at the Castle Court shopping centre in Caerphilly.

The group gave out free Fairtrade organic cotton bags to shoppers to encourage them to reuse their shopping bags instead of purchasing bags. As part of the bag giveaway the group asked shoppers and local stores to sign a Fairtrade petition and a climate change pledge to raise awareness of the issues to local businesses and residents.

The Mayor, joined the Caerphilly Fairtrade group at the Castle Court centre to encourage people to support Fairtrade. John Couzens, Centre Manager for the Castle Court centre supported the

event, signing a climate change commitment for the Castle Court centre. Over 400 local shoppers signed the petition to support Fairtrade and received a cotton bag.

The event was held to raise awareness of Fairtrade, Reuse and Climate Change as part of the groups work to continue to renew Fairtrade town status for Caerphilly.

### **Fairtrade Fortnight 2012**

During Fairtrade Fortnight a Fairtrade tea party was held at the Caerphilly Visitors Centre to raise awareness of Fairtrade to local residents. Visitors to the centre enjoyed a free cup of Fairtrade tea and a Fairtrade Fairy cake or banana whilst listening to Joseph, a Fairtrade tea producer from Kenya, who spoke about how Fairtrade had supported his village. Local residents were also given a Fairtrade cotton bag as part of the event, which attracted over 50 people during the afternoon.

During the event local residents were encouraged to 'Take A Step' towards Fairtrade by changing one item on their weekly shop to a Fairtrade item.

### **Supporting Services**

A key element of the work of the SD & Living Environment Team is to support individual Services within the Authority to address sustainability issues. In 2011/12 specific projects were undertaken with 7 on sustainable development looking at their individual Service areas and how they could influence others. Some examples of this work are outlined below.

The Sustainable Caerphilly Intranet Site provides a central source of information on sustainability issues for staff. The site has six sections focusing on Energy & Water, Health & Lifestyle, Travel & Transport, Procurement, Waste Minimisation and the Green teams. It is updated on a regular basis and includes "how to" information on a range of issues from how to register for the car share scheme to organising and event sustainably.

### **Planning**

#### **SD training for planners**

Work with the Strategic & Development Plan Team highlighted the need for a short course for planning professional practitioners to provide them with practical training in order to ensure that development control decisions are consistent with national and international climate change obligations, including contributions to renewable energy targets and aspirations

The training built on the existing skills of professional staff and was a hands on practical training session. The training was attended by 30 officers from within the Planning Division, including Development Control, Strategic Planning and Urban Renewal Sections.

The course was delivered by trainers from the University of Western England.

#### **Community Wardens**

The SD & LE Team worked closely with the Community Wardens to provide advice and guidance on sustainable transport, cycles and cycle equipment to support their move to deliver their service

by pushbike instead of their traditional minibus. The team provided advice on suitable bikes, clothing and safety equipment along with key contacts for cycle training to ensure the wardens received the necessary training and equipment before delivering their service by bike.

The team of 10 wardens, who provide a high visible presence on the streets of the Caerphilly county borough and play a key role in helping to make our communities safer places to live, work and visit, are now delivering their service more efficiently and sustainably, whilst also helping to promote sustainable transport to local residents as part of their role.

## **ICT Services**

The SD & LE Team continues to work closely with ICT Services, the Energy Management Team and the Carbon Reduction Group on ICT related initiatives,

IT currently represents about 2% of CCBC's total CO<sub>2</sub> emissions. Within that 2%, 39% can be attributed to PCs and monitors, 23% to servers and cooling, 15% to fixed-line telecom, 9% to mobile telecom, 7% to LAN and office telecom, and 6% to printers.

## **CRT Replacements with Flat Panel Monitors and energy efficient PCs**

Our decision to adopt flat panel monitors several years ago has dramatically reduced power consumption over CRTs, with LCD display using about 60% less electricity.

CCBC now has 100% Flat Panel Monitors installed on corporate PCs. Schools are also being encouraged to adopt this strategy and we are working closely with them and advising to replace the current aging CRT equipment.

Across all Schools 31% of monitors are not of the flat panel type (Primary Schools 11% and Secondary Schools 20%). ICT Services is continuing to work with schools to increase the use of low energy flat panel monitors.

## **PC Power Saving and Shutdown**

ICT continues to monitor the power management schemes introduced onto our PCs and laptops in December 2009, which:

- Turn Flat Panel monitors into Standby mode after 5 minutes of inactivity.
- Place the hard disk inside the PCs into Standby mode after 30 minutes of inactivity. 10 minutes for laptops to preserve battery life.
- Place the PC into Standby mode after 1 hour of inactivity. 30 minutes for laptops to preserve battery life.
- Remove Active Screensavers as these use processing power, which keep the PC active. Having no screensaver reduces processing and therefore reduces power consumption.

During 2011/12 PCs have been shut down on over 43,000 occasions. We continue to see between 136 to 175 PCs shutdown during weeknights and between 27 to 31 during weekends.

This is a significant improvement from 2010/11 when between 180 to 226 PCs were shutdown during weeknights and between 40 to 47 during weekends.

## **Multi Function Printers**

The deployment of Multi function printers (MFPs) to consolidate local printers, scanners and fax machines onto single devices is progressing well and we now have a very well established fleet of 241 MFP's, which replaced some 1,300 individual devices. All local printers and scanners have been removed from offices except for those used for very specific niche functions.

The deployment of MFP's allow us to accurately monitor printing and copying and to set criteria to limit the environmental impact. In 2011/12, 3,816,321 printing/copying jobs were undertaken, using a total of 14,992,774 sheets of paper. On average each user used 176 pages per week.

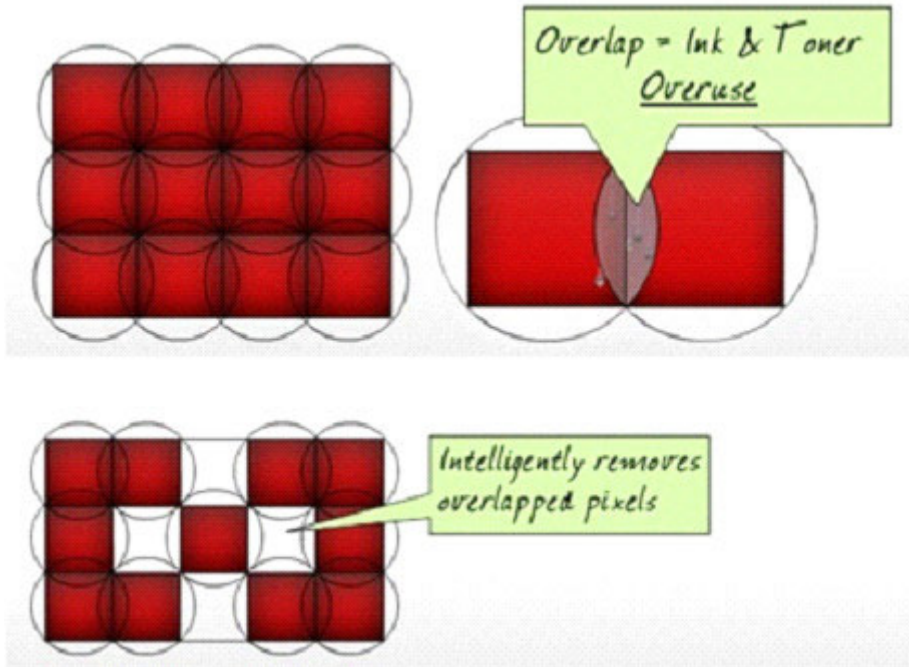
The use of the printers allows individuals to delete jobs sent to them in error. The system also deletes jobs that are not printed within a set time period. In total 453,235 pages were saved by jobs being deleted after they had been sent to print.

Double sided printing (duplex) has been set as the default setting on all MFP's. This has resulted in 4,349,768 pages being saved in 2011/12.

## **Print Strategy for the Welsh public sector**

Caerphilly Council is also currently working with the Welsh Government as the lead authority on a Print Strategy for the Welsh public sector. As part of this work we have tested a product called PretonSaver which manipulates printed output to reduce the amount of toner used as part of the printing process.

The basis of the Preton toner saving software product is that it will remove the percentage of toner that is "wasted" in the majority of prints when the toner/ink spots overlap.



By reducing the overlap a saving of approx 30% has been shown to be achievable without any major degradation of the print quality. Further savings can be realised by further fading of the print quality for draft documents.

This product has now been purchased and is being implemented within the authority during the first quarter of the 2012/13 financial year.

### **The re-use of ICT equipment**

ICT Services still ensure re-use of equipment that is no longer required but is still serviceable.

Corporate PCs that are replaced as part of the PC Replacement Programme are donated back into CCBC Schools via a planned schedule established by Schools Effectiveness Unit and ICT Services. Corporate PC donations to schools are raising the technology levels of equipment which are more power efficient.

PCs and Monitors that are not reusable are disposed of using Secure IT Disposals, a third party supplier accredited to the highest disposal and security standards, as part of the WEEE Legislation.

### **Remote Control and Desktop Support to reduce travelling**

ICT Services continue to utilise Desktop Remote Control Software to assist with users helpdesk calls. This allows the engineer to take control of a users mouse and keyboard as if they are actually sat with the user. This has achieved a dramatic deduction in travelling and fuel costs. Our engineers are also allocated to zones, split North, South, East and West, which further reduce the need to travel large distances.

## **Procurement Services**

A considerable amount of work has been undertaken with Procurement Services as part of the sustainable procurement group including training on sustainable development, introducing social clauses in contracts and maximising ways in which the procurement process can support our local economy.

Procurement Services are striving to embed sustainability into their procurement processes by including their Sustainability Policy in all tender documentation and undertaking Sustainability Risk Assessments (SRA) at the initial stages of all relevant procurement processes. The key focus of the team is now around Community Benefits and implementing this in key procurement projects wherever possible. Procurement Officers attended training by Value Wales on the 'Can Do Toolkit' which provides guidance on how to implement Community Benefits into tender processes and contracts.

There are a number of areas that can be considered with regards to Community Benefits and depending on the type of contract they can be included as a Core element of the contract or a Non Core element of the contract for consideration. Areas for consideration can include:

- Consideration of opportunities to recruit and train long term economically inactive persons as part of the workforce delivering projects.
- Consideration to offer training opportunities such as apprenticeships / NVQs, work experience to schools and colleges etc
- Advertising sub contracting opportunities for SMEs via Sell2Wales
- Community projects, community engagement, educational programmes etc

This element is becoming more widely incorporate moving forward but some of the contracts that have included a variety of provisions for Community Benefits to date include:

Term Service Contract for Carriageway Surface Dressing and Footway Slurry Sealing  
Term Service Contract for Carriageway Re-Surfacing,  
Risca Public Artwork Commission,  
Cwm Ifor Primary School,  
Framework for Planning Services Landscaping Works,  
Supply and Distribution of Fresh Pasteurised Milk,  
Provision of Library Refurbishment at Abercarn,  
Framework for Provision of Housing Related Support Services

Significant support is given to local businesses to enable them to tender for our work. Our Supplier Relationship Officer has been running supplier clinics on a weekly basis to provide one-to-one support to suppliers as well as running Supplier Events in conjunction with the Supplier Development Service (SDS) a Welsh Government funded body who provide support to Welsh based suppliers, including assistance with completing tender documentation. In 2010/11, 148 local suppliers were awarded contracts.

## **Carbon Reduction Strategy**

The Authority, working with the Carbon Trust, developed a long-term carbon reduction strategy in



2009. The ambitious but achievable target of a 45% reduction in CO<sub>2</sub> emissions by 2019 was agreed. It is anticipated that this target will be met by a mixture of:

- good housekeeping (10%)
- invest to save energy efficiency projects (20%)
- good design and asset management (10%)
- renewable energy (5%)

### **Good Housekeeping**

The authority is seeking to raise awareness and provide training on good practice methods, such as switching off equipment after use, heating/cooling controls, and ensuring proper time settings on controls. These are no-cost and low-cost approaches, which result in energy savings. There have been awareness-training events to school head teachers, caretakers and governors throughout 2011/12 and there has also been an authority wide awareness campaign.

During the year, 27 energy audits were completed and presented to building managers.

A number of high energy use buildings were identified and meetings held with the building Managers to look at ways of improving their energy efficiencies.

The Green Team at Ty Pontllanfraith has played an active role in raising awareness of energy issues and implementing projects to reduce consumption.

Street lighting accounts for 27% of our carbon emissions. After public consultation, the Authority agreed to turn-off 6,000 street lights between midnight and 5:30 am, on inter-urban roads, saving approx £250,000 a year and reducing CO<sub>2</sub> emissions by approx 898 tonnes.

### **Invest to save**

The authority is actively pursuing energy savings that can be achieved by installing energy saving technology such as insulation to prevent heat loss and control equipment such as movement detectors on lighting or voltage optimisation equipment. A significant drive, led by the carbon group, has resulted in all schools insulation being upgraded, and there has already been a number of technology upgrades to reduce carbon emissions through invest to save schemes throughout 2011/12.

In September 2004 the Authority established “Local Authority Energy Fund” (LAEF) in partnership with the Carbon Trust. The Authority invested £500,000, which was matched to £300,000 from the Carbon Trust, to develop a rolling programme of projects. Savings generated by the scheme are invested into new projects.

In 2011/12 the LAEF scheme contributed its largest financial investment since it was established. LAEF implemented 18 projects totalling £211,665 and saved 230 tonnes of carbon. Some of the key projects include:

- Pontllanfraith leisure: pitch flood lights.
- Unit 1 Woodfieldside: lighting upgrades.
- Highways: street-lighting upgrades.
- Rhymney Comprehensive: PowerPerfector.
- St Cenydd Comprehensive: pipe insulation.
- Plasyfelin Primary School: insulation valve and flange.

A Combined Heat & Power (CHP) tender has been returned for works at Caerphilly and Heolddu leisure centres. The tender has been evaluated proving a payback rate of 7.5 years with annual carbon saving of 110 tonnes. This could now be implemented in 2012/13.

Photovoltaic (PV) schemes are being implemented at TY Penallta, Trinity Fields, Ysgol Ifor Bach and St James primary to a combined value of £217,000. This is from additional funding to the LAEF funding.

Ongoing work includes investigating lighting upgrades and controls at 13 primary schools and 5 comprehensive schools.

### **Asset management**

The Authority has wherever possible strived to build to the highest possible sustainability standards. The Authority's newest school Greenhill Primary School in Gelligaer has become the first 1<sup>st</sup> A+ rated school in the UK under the Energy Performance Certificate programme. It has achieved the highest ever BREEAM rating for a school in the UK and is likely to become the first ever BREEAM "outstanding" school in the UK.

The school generates more electricity than it consumes, and boasts rain water harvesting, solar shading, low air leakage, naturally ventilation, very high insulation levels, Micro CHP, Four 1.5kW wind turbines, and a 500 sqm photovoltaic array. Energy consumption and generation data gathered to date for Greenhill Primary School is encouraging and the PV Array is on course to exceed the predicted annual electricity output of 50,000 kWhrs for the period May 2011 to April 2012.

Greenhill won the 2011 CLAW Sustainability Award and the 2011 Constructing Excellence Wales Low/Zero Carbon Award.

St James Primary School was operational from September 2011. The school also incorporate thermal insulation levels far in excess of building regulation requirement, Combined Heat and Power Plants', and rainwater harvesting which allows rain water to be recycled to flush toilets and for hose pipe use.

School governors, teachers, pupils and parents have all enjoyed the benefits of the new facilities, with improved pupil behaviour noted in both Greenhill and St James Primary Schools.

The construction of Cwm Ifor Primary School was started in 2011. This will be a timber framed and walled structure and it will be highly thermally efficient. Completion is expected in 2012.

### **Renewable Technology**

The authority has a number of renewable technology projects in place and is actively seeking to replicate renewable technology projects where there are opportunities to do so and where finances permit. Ty Penallta is heated/cooled by ground source heat pumps. Greenhill Primary School has solar, wind and Combined Heat & Power plants. A programme of insulation and renewable energy projects is underway on our Housing stock. A programme of installing PV

panels on schools in the Heads of the Valleys area has installed 9 systems to date (see Solar Schools section).

£404k was allocated for implementing photovoltaic (PV) schemes at: TY Penallta (20kW rated size) Trinity Fields school (25kW) Ysgol Ifor Bach: (35kW) and St James children's unit (35 kW). Potentially reducing our carbon footprint by 53 tonnes a year and saving in excess £31,000 a year. A scoping study to assess the opportunities for hydropower across the county borough is currently underway. A hydroelectric power scheme is being considered for Cwm Carn visitor centre and a scheme near the Council offices at Pontllanfraith.

Planning permission has recently been granted for two 2.5MW wind turbines on Oakdale industrial estate. It is anticipated that the turbines will allow cheaper electricity to be supplied to businesses wishing to locate on the Council owned site

## **Housing**

Housing accounts for 27% of the UK's carbon emissions. The rising cost of energy has resulted in an increase in Caerphilly residents being driven in to fuel poverty. Working with Housing Services, housing associations and residents to address energy issues was identified as a priority for the SD & Living Environment Team in 2011/12.

The Authority's Housing Services have an ongoing programme involving retrofitting homes with innovative measures including, external wall insulation and renewable technologies such as solar panels and heat pumps. They also have a programme replacing old boilers with new condensing boilers.

Work is being undertaken to identify properties in areas of deprivation that are eligible to receive cavity and loft insulation (free of charge to the home owner /tenant) to help reduce fuel bills.. The Energy Team within Housing Services offer energy efficiency advice and information to residents with regards to the Welsh Government national fuel poverty scheme (NEST).

Work is ongoing to actively seek to secure funding to enable us to continue to undertake energy efficiency improvements to properties in the county borough such as working with the Heads of the Valleys programme to address homes off the mains gas network, and with the Rural Development Fund to tackle rural communities. In addition the Authority is in discussions with energy suppliers to obtain funding via the Community Energy Saving Programme (CESP) and Carbon Emissions Reduction Target (CERT) programme.

## **Hollybush Sustainable Energy Study**

Heads of the Valleys funding was secured to undertake a study into energy issues for Hollybush. With 120 properties, the village is the largest in the county borough that is not connected to the gas network. The majority of properties are pre 1920 solid wall terraced properties. The study included door to door surveys collecting data on energy use, fuel type, income etc on which to base findings and recommendations.

The study found that connecting the village to the mains gas network would not be economically viable.

A review of the relevant policy and strategy documents for the region indicated that there is strong government support for initiatives relating to energy improvements, renewable energy development and mechanisms to protect vulnerable households from the risk of fuel poverty. Funding initiatives and drivers that have been, or are being put in place, offer a considerable amount of potential to the residents of Hollybush to realise their goal.

The study found that the improvement measures that are likely to provide the largest cost savings are the installation of external or internal wall insulation to solid wall dwellings and the upgrade of oil and LPG boilers to modern, efficient heating systems. The study concluded that there is scope for the village to considerably reduce its overall energy demand and save costs by adopting a number of improvement measures and technologies and by taking advantage of a range of existing and upcoming funding mechanisms that have been identified.

While benefits can most certainly be realised by individual householders, it is likely that if the community are able to come together to support a shared goal they will be able to bring about wider benefits for the whole community. Local consultation indicated that there was a possibility of setting up a community based energy project.

Hollybush was selected as one of the two areas in the county borough to be submitted for Arbed II funding. A decision on this funding has been delayed by the Welsh Government, resulting in a delay in the installation of energy efficiency measures

### **Parc Crescent, Bargoed**

United Welsh Housing Association in partnership with Cardiff Metropolitan University (formerly the University of Wales Institute Cardiff) presented a paper at the World Sustainable Building Conference in Helsinki in October 2011. The paper examines the impact of renewable technology installations at the Parc Crescent scheme in Bargoed. This project was part funded by the Living Environment Partnership.

The research has now concluded and Cardiff Metropolitan University are interrogating the results before issuing the final paper with recommendations to United Welsh Housing Association for future developments. It is likely that the building fabric will always be the initial focus of all new build schemes with renewable technologies integrating around this approach.

### **Waste**

Caerphilly County Borough Council's 51% for reuse, recycling or composting for 2010/11 and 227.3kg of residual waste per person ranked the council a respectable 17th out of the 202 local authorities across England, Scotland and Wales listed in the league table. In the first half-year of 2011-12 this figure has risen to 57% demonstrating a significant improvement.

Contracts have been awarded for the treatment/disposal of various waste fractions, including textiles, wood and paper. Opportunities are being sought to collaborate with neighbouring authorities on regional procurement contracts.

The public sector food waste collection service has been expanded. A food waste collection service was introduced to schools Sept 2011, with 77 schools currently participating. Expansion of this service to other Public Sector buildings is planned for Summer 2012.

## **Education for Sustainable Development**

Education for sustainable development (ESD) has been a priority within the Authority since October 2004, when a dedicated ESD Officer was appointed to drive forward the agenda in the county borough. Embedding an understanding of sustainable development within schools and young people is seen as a vital element of achieving a sustainable county borough.

Over the years the role has been expanded to support other services including the youth service, adult education and more recently the early years sector.

## **Education for Sustainable Development & Global Citizenship Communication**

### **School Communication**

Education for Sustainable Development & Global citizenship (ESDGC) support, communication and delivery has been communicated across the county borough through the Green Links e-newsletter, the electronic green envelope, the ESDGC Practitioner network, education e-bulletins and school cluster groups. The Sustainable Caerphilly website has a specific section providing on-line information and resources for schools, which is updated regularly.

Work has been undertaken to ensure that strong links were made with principal advisors within Learning, Education and Inclusion to raise awareness and understanding of ESDGC and the work currently being undertaken in the county borough.

### **Youth Service**

Work is ongoing to support the youth service to raise awareness and understanding of ESDGC and provide guidance to incorporate ESDGC into the youth work curriculum. Work undertaken to date includes:

- Developed a youth ESDGC Toolkit to support youth workers incorporating ESDGC into the youth work programme.
- ESDGC has been incorporated into all aspects of the youth service through their comprehensive ESDGC Action Plan.
- ESDGC web pages developed on the sustainable Caerphilly website for the youth sector.

### **ESDGC Youth Award Scheme**

The ESDGC Youth Award Scheme has been developed to support youth groups working on environmental and sustainable projects as part of the youth work curriculum.

The ESDGC Award Scheme, the first of its kind in Wales, has been developed as a partnership project between Caerphilly CBC and Bridgend CBC Sustainable Development teams and youth services. It's been developed using features from other sustainable award schemes and will support youth groups delivering ESDGC action as part of the Estyn inspection process.

There are three levels to the award (bronze leaf, silver twig and gold tree), which is suitable for youth groups of any size. It is expected that each award level will take approximately 12 months to complete.

The award scheme is currently being trialled with 5 youth groups in the Caerphilly county borough and 3 youth groups in the Bridgend county borough. The award scheme will be evaluated after 12 months and if successful, it will be rolled out to other youth groups within the Caerphilly county borough.

### **Adult Education**

Work is ongoing to support adult education to raise awareness and understanding of ESDGC to adult education centre managers and tutors. Work undertaken to date includes:

- Developed an adult community learning ESDGC toolkit to support tutors incorporating ESDGC into their curriculum areas.
- ESDGC web pages developed on the sustainable Caerphilly website for adult community learning.

### **ESDGC Training for Adult Education Week**

An ESDGC training session was developed for adult education tutors, which was delivered as part of adult education week in January 2012. The aim of the training session was to support tutors incorporating ESDGC into their curriculum subject areas.

## **Education for Sustainable Development & Global Citizenship work with Teachers**

### **Eco School Back To Basics Training**

Eco School Back to Basics training was held for primary and secondary school teachers as part of the Eco Schools Wales training programme. The training was promoted to every school in the Caerphilly county borough, with 17 teachers from county borough attending. The training was designed to support new eco school coordinators working through the eco schools process, providing best practice examples and resources available to schools.

### **ESD & GC Resource Boxes**

The twenty two resource boxes, developed to support schools and youth groups incorporating ESDGC into the curriculum and youth work programmes have been reviewed and updated with additional lesson plans and curriculum links. The resource boxes contain books, CD's artefacts, curriculum links and lesson plans and are loaned free to schools on a half term basis. The majority of the resource boxes have been booked every term with approximately 45 schools benefiting from the resources to date.

## **ESDGC Education for Sustainable Development & Global Citizenship work with Governors**

### **ESDGC Governor Training**

Governor training sessions have been run once a term for governors within the Caerphilly county borough to support the actions highlighted in the International ESDGC Governor Charter. Lunchtime and evening training sessions have focussed on energy efficiency, the eco schools programme, sustainable development and the Fairtrade Schools Scheme. 24 governors received training on ESDGC during 201/12.

### **ESDGC Governor Toolkit**

An ESDGC Toolkit for school governors is currently being developed as a partnership project with Bridgend county borough council.

The toolkit is being developed to provide guidance to governors to enable them to support their schools on ESDGC and to support the delivery of sustainable projects and work towards the various award schemes.

The toolkit contains information on ESDGC, sustainable award schemes, activities to run with governors, teachers and pupils and guidance on the Estyn inspection framework and the evidence required for ESDGC.

The toolkit will be launched in the autumn term via governor networks and through the Governors Wales network and promoted as an agenda item at a Governor ADEW meeting.

## **Education for Sustainable Development & Global Citizenship work with Pupils**

### **Early years**

#### **Eco Award Scheme for Early Years Settings**

The Eco Early Years Award Scheme is being developed to support early years settings working on environmental and sustainable projects as part of the settings development plan. The emphasis is on a commitment to environmental awareness and sustainable development within the setting and the wider community.

There are 3 levels to the award scheme, bronze, silver and gold, with each award level taking approximately 12 months to complete. The award scheme has been designed to compliment the Healthy Early Years (HEY) Scheme. Settings who complete phase 3 of the HEY scheme, which contains the environment section, will also achieve the bronze Eco Early Years Award. The scheme also complements the Eco School award scheme to ensure there is continuity when the children move from early years settings to a school setting.

The award scheme documents are currently being finalised, the aim is to launch the award in the spring term 2013 and trial the scheme with a variety of early years settings and childcare providers over a 12-month period.

#### **Healthy Early Years Award Scheme (Environment Section)**

The Caerphilly Healthy Early Years (HEY) Scheme was initiated in 2008 to further support early years and childcare settings to promote the health and wellbeing of the whole setting community including children, parents/ carers, and staff members.

The HEY Scheme runs for 3 years with one phase completed each year. The phases contain the following topic areas:

Phase 1 (nutrition, oral health and play)

Phase 2 (a safe stimulating environment, emotional health and wellbeing)

Phase 3 (a health promoting workplace and the environment)



The SD & LE Team have been working with the Early Years Coordinator to develop the environment section of the HEY Scheme Phase 3, which will be rolled out to settings as part of phase 3 in 2013.

## Eco Schools Programme

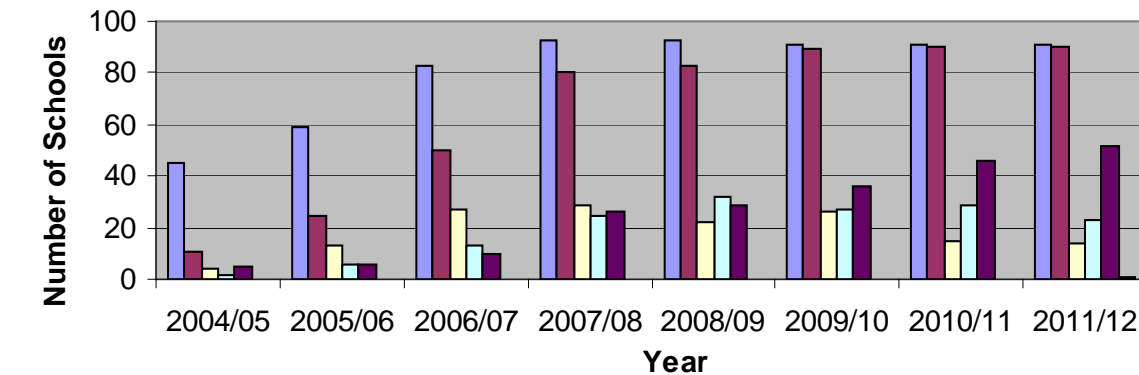
### Eco Schools

We achieved 100% participation with 91 schools in the Caerphilly county borough working towards the Eco Schools Programme in March 2009. During 2011/12 schools have received support to help them achieve their bronze and silver eco school awards and progress through the programme to work towards the prestigious green flag award.

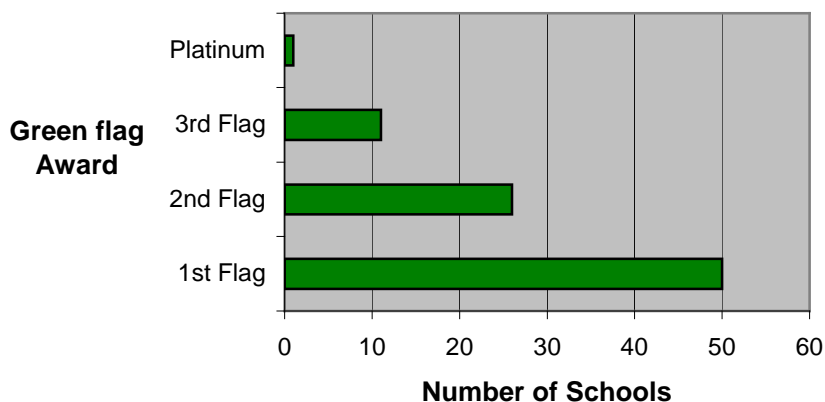
By 31<sup>st</sup> March 2012, 90 of the 91 schools had achieved an Eco School award. Out of the 90 schools with an award, these are broken down into 14 Bronze awards, 23 silver awards and 53 Green Flag awards (including 23 second green flag awards and 11 third green flag awards). 58% of our schools hold the Eco School green flag award.

St Gwladys Bargoed School achieved the Eco Schools Platinum award in March 2012, the first school in the Caerphilly county borough to achieve the coveted award, this is a huge achievement, with only 29 schools in Wales achieving the award.

### Number of Eco Schools



■ Registered 
 ■ Awards 
 ■ Bronze Awards 
 ■ Silver Awards 
 ■ Green Flag Awards 
 ■ Platinum Awards



## **Eco School Support**

Considerable support has been provided to primary and secondary schools in the county borough working towards the Eco School programme over the past year, including

- 59 individual school visits made to support schools working through the Eco School programme.
- 6 Eco School Green Flag assessments undertaken for neighbouring authorities.
- 12 Eco School Pre Green Flag assessments undertaken for schools in the Caerphilly county borough
- Supported 17 schools renewing their Eco School Green Flag status to ensure that no school lost their Eco School Green Flag status, in line with the new Eco Schools Green Flag Renewal Policy.
- Eco School Back to Basics training run by Eco Schools Wales as part of their training programme, for schools in Wales, focusing on the process involved in the Eco Schools programme from developing an action plan to monitoring and evaluating actions and developing an eco code.
- Developed Green Grins Index Welsh version, to encourage children to calculate how sustainable they are. The index, aimed at children aged 8 to 12, will calculate their ecological footprint, health and happiness and provide tips on how to be more sustainable. The index allows children to monitor their sustainability, which supports the schools Eco School work programme.
- Installed solar photovoltaic panels on nine schools in the Heads of the Valley area through the Solar Schools Project – Phase 1, supporting the energy efficiency topic of the eco school programme, as well as supporting the authority's commitment to reducing carbon emissions.
- Developed the Caerphilly Solar Schools Education Resource to support schools incorporating renewable energy and energy efficiency into the curriculum. The pack caters for primary and secondary schools, containing classroom and after school activities, lesson plans for each key stage, resources to support the activities and a list of useful websites and contacts throughout Wales.

## **Fairtrade**

### **Caerphilly Fairtrade Group**

The Caerphilly Fairtrade group has continued to promote their Fairtrade town status, which was renewed in March 2011. Businesses, community groups, schools and individuals have all contributed to making Caerphilly a Fairtrade town by pledging to support Fairtrade and promote the initiative. Twenty-four schools have signed up for the Fairtrade Schools Scheme to date.

### **Fairtrade School Training**

18 schools have participated in Fairtrade School training sessions, which have been run to support schools working towards achieving Fairtrade School Status. The training has been run over three sessions giving teachers the opportunity to work through the scheme whilst attending the training. To date only one school in the Caerphilly county borough has achieved Fairtrade School status. Ysgol Y Lawnt achieved the Fairtrade School status in November 2011, with the assessors commenting that the school had done above and beyond the requirements for the award.

### **Fairtrade School Workshops**

Five Fairtrade school workshops were held during 2011/12 to provide additional support to schools working towards the Fairtrade Schools Scheme as part of the Fairtrade School Training sessions. The workshops, which looked at Fairtrade and Reduce, Reuse, Recycle were delivered to a range of primary and secondary school pupils.

Schools were also given Fairtrade Organic cotton bags to give out to local residents as part of their school Fairtrade coffee mornings to raise awareness of Fairtrade and sustainable development to the whole school and local community.

Twenty-four schools in the Caerphilly county borough are currently working towards the Fairtrade Schools Scheme as part of their Eco School programme.

## **Education for Sustainable Development & Global Citizenship Projects**

### **Green Grins Index – School Sustainability Index**

As part of the process of raising awareness and understanding of ESDGC to schools the SD team developed the Green Grin o meter, a children's version of the Caerphilly Sustainability Index to enable young people to calculate their own sustainability score in October 2010.

The Welsh version of the Green Grin o meter was launched in September 2011 and was promoted to Welsh primary schools in the county borough.

By answering eleven questions the children are given a score for their ecological footprint, health and happiness. They are then given feedback based on their own answers, which gives tips and advice on how to live more sustainably.

The development of the Welsh version of the Green Grins Index has been partly funded by the WLG A Bespoke projects fund Visit [www.greengrin.co.uk](http://www.greengrin.co.uk) or [www.cymraeg.greengrin.co.uk](http://www.cymraeg.greengrin.co.uk) to view the Green Grin o meter and find out how sustainable you are.

### **Caerphilly Solar Schools Project – Phase 1**

In January 2009 the SD Team and United Welsh Housing Association (UWHA) developed the concept and proposal for the Solar Schools project, and secured Heads of the Valley (HoV) funding at the end of the 2008/09 financial year.

£200,000 had been secured to install solar photovoltaic panels on nine schools in the HoV area, plus an additional £20,000 to develop educational resources to support the project and maximise the educational benefits.

The nine schools to receive solar photovoltaic systems are:

- Heolddu Comprehensive School
- Rhymney Comprehensive School
- Lewis School Pengam
- Pontlottyn Primary School
- Fochriw Primary School
- White Rose Primary School
- Bryn Awel Primary School
- Ysgol Bro Sannon
- Markham Primary School

The Solar Schools project supports the authority's work towards the Carbon Reduction Strategy by reducing the schools energy usage and carbon dioxide emissions as well as acting as a prominent reminder to each community of the urgent need to tackle climate change.

Remote monitoring equipment has been fitted to the nine installations to allow the schools to monitor their data and use it as part of their curriculum work.

### **Caerphilly Solar Schools Education Resource Pack**

The Caerphilly Solar Schools Education Resource Pack was launched in May 2011 at White Rose Primary School, with 65 pupils, teachers and officers attending to find out more about the education pack and the solar school project in the county borough. As part of the launch event the pupils received a renewable energy workshop and every school attending received a free solar PV resource kit to accompany their education resource pack.

The education resource pack caters for primary and secondary schools, containing classroom and after school activities, lesson plans for each key stage, resources to support the activities and a list of useful websites and contacts throughout Wales.

The resource pack has been distributed to every school in the county borough.

### **Caerphilly Solar Schools Project – Phase 2**

The SD Team are working with United Welsh Housing to survey sites for phase 2 of the Caerphilly Solar Schools Project. Approximately £60,000 funding has been identified for phase 2, which will look at continuing to install solar photovoltaic panels on schools in the Heads of the Valley (HoV) area.

Surveys are currently being undertaken on the remaining 10 schools in the HoV area to assess their suitability for installation of solar photovoltaic panels. Due to the significant reduction in costs of solar PV systems it is hoped to install solar PV on an additional 5 or 6 schools as part of the project.

### **ESDGC Schools Network**

The ESD Officer supports the ESDGC Schools Network, working to promote the take up and understanding of ESDGC in Caerphilly, Merthyr, Bridgend, RCT and the Vale of Glamorgan. Projects undertaken in 2011/12 include governor training, global citizenship links for primary and secondary schools and investigating grant funding for ESDGC projects.

### **ESD & GC Partnership Support**

Support has been received from external partners to support various events run by the SD Team, including Groundwork Caerphilly, Keep Wales Tidy, Eco Schools Wales, Dwr Cymru Welsh Water, Wales Fairtrade Forum, RSPCA, Dogs Trust and the Valleys Race Equality Council.

### **Young Enterprise**

The SD & LE Team have support Young Enterprise, with The Team Leader acting as the Business Advisor to St Martin's School Young Enterprise team.

Young Enterprise is the United Kingdom's largest business and enterprise education charity. Every year they help 250,000 young people learn about business and the world of work in the classroom under the guidance of volunteers from 3,500 companies. In Caerphilly various departments of the Council are heavily involved in mentoring and supporting the work.

The SD & LE Team sponsored the award for the environment category in 2011/12. The environment award was won by year 10 pupils from Pontllanfraith Comprehensive who developed a range of eco-friendly products including eco shopper bags and environmentally friendly stationery

The overall award for Caerphilly, Blaenau Gwent and Torfaen was won by 14 Blackwood Comprehensive pupils. The team, Nucleus, progress to the national finals, which will be held at the Royal Welsh College of Music and Drama in Cardiff in June. Their invention is a mobile phone charging accessory, which has a shelf to put your phone on while it charges. The lead from the charger wraps around the device, making the job of charging your phone "safer" and "more tidy". It has already received support from the Sainsbury's store in Pontllanfraith, which is looking to buy some samples

## The Living Environment

The Sustainable Development & Living Environment Team co-ordinates the Living Environment Partnership (LEP), which is one of the 4 thematic partnerships of Caerphilly's Community Strategy. The other thematic partnerships are Health, Social Care & Well Being, Regeneration and Education for Life. The LEP reports, and is accountable, to the Local Service Board.

### Working Groups

There are 3 working groups, which were set up in 2008, based on addressing the original 7 objectives under the Living Environment Theme of the Community Strategy - the Caerphilly Environment Quality Group (CEQ), the Great Outdoors Group and the Climate Change Group. Now the groups have evolved and are very much collaborative bodies with the Regeneration and Health themes in particular.

### The Caerphilly Environmental Quality (CEQ) Working Group

The CEQ Group is a large, diverse partnership with a very wide remit but has citizens' quality of life at its core. This group has objectives that include the encouragement of sustainable homes and neighbourhood environments, the developing of community pride and active participation in environmental improvement, and the reduction of anti-social behaviour, environmental crime and the fear of crime. The Group's priority areas for 2011-12 were environmental crime, in particular fly tipping, engendering civic pride and community food growing.

The CEQ Group was successful in securing an allocation of £25,000 funding from the Authority's Community Assets Fund for the Group to undertake innovative priority projects during 2011/12. The CEQ Group operates a small grants scheme, which requires at least a £1 for £1 match funding to encourage maximum partner input. The £25,000 Community Assets money resulted in partnership projects worth £62,166 - a partnership match funding input of £37,166. During 2011-12, the CEQ Group supported the following innovative projects:

Enviro Pride, in Caerphilly Basin. The Enviro Pride campaign is a partnership effort to tackle poor environmental quality and environmental crime in the borough. The project commenced in early September 2011 with a fortnight's concerted activity in Caerphilly town, which coincided with the borough's two flagship events - the Proms in the Park on the 10<sup>th</sup> September and the Tour of Britain Cycle Race on the 14<sup>th</sup> September. Led by CCBC Environmental Health and Enforcement and Public Services, a host of partners including Keep Wales Tidy and Fly Tipping Action Wales got involved in a range of activities involving local residents and businesses in cleaning up Caerphilly and presenting a high-quality image of the town (and wider borough) to all our visitors.

The **Enviro Pride** project's second phase enabled the Enforcement team to purchase equipment, including covert cameras, to help them tackle fly tipping hot spots around the borough. The project cost: £10,000. CEQ contribution: £5,000, Public Services StreetPride contribution: £5,000 plus major officer time contribution from Enforcement Team and Public Services.

**Wheelie Bin Locks**, in Hengoed Ward. The Wheelie Bin Locks project was a pilot to help elderly residents beat the thieves who target their wheelie bins. In the Hengoed ward, some of our most vulnerable residents suffer repeated offences, with wheelie bins stolen and burned out in the back streets or in green spaces. This causes an environmental hazard, as well as causing these residents the distress of being victims of crime, and replacing the bins has a significant cost to the Council too. Gwent Police and the Community Safety Partnership provide vulnerable residents

and repeat victims with wheelie bin locks that allow these residents to chain their wheelie bins up when they aren't ready for collection in the hope that this will prevent the ongoing problems. The Police help to fit the wall anchors and also help residents understand how to use the locks to empower them. It is hoped that if the project is a success that it can be offered to other vulnerable residents in other wards in future. Project cost: £1,800. CEQ Group contribution: £900, with £900 minimum secured in officer time contribution from Gwent Police / Community Safety Partnership.

**Non-Communities First Environmental Officer.** The success of this project has led to the CEQ Group supporting the non-Communities First Community Environmental Officer for the third year running. The "Non-CF Officer", who was based with Groundwork Caerphilly, works with community partnerships in areas not covered by the Communities First programme, which leaves two-thirds of our borough relatively under-resourced. The Officer identifies environmental projects with communities, and working with other Community Regeneration officers, assists those communities in improving their area. Projects are often quite diverse in nature, as the Officer has a range of practical skills that they can rely on to take on many challenges. The CEQ Group support for the project is vital to ensure that there is environmental assistance for non-CF partnerships, as they are not able to access the same level of funding or support as designated Communities First areas. Total project cost: £30,366. CEQ Group contribution: £9,100 (£7,500 towards officer plus £1,600 towards materials). £21,266 was provided by Community Regeneration and the Non-CF Community Partnerships. Some of the projects undertaken by the officer in 2011/12 include:

- **Crosskeys.** Cox's Quarry path was cleared in association with Crosskeys walking group and the local partnership.
- **Crumlin.** Support was given to the Crumlin partnership and the Kendon Community Hall Association to create a garden for the new hall.
- **Llanbradach.** Coed Y Brain School in Llanbradach was assisted in creating a bird hide in their "wild" area. Bird and Box making workshops and bird watching and bat spotting events were held in the school's woodland area.
- **Maesycwmmer.** The local primary school's Eco and Gardening Committee helped transform the space in front of the entrance to Maesycwmmer Community Centre by replanting the main planter with sensory plants as part of a planting workshop.
- **Nelson.** The non-CF officer worked closely with CCBC Regeneration Team, Nelson Village Partnership and Friends of Wern Park to increase use and participation in the Green Flag awarded Wern.
- **Newbridge.** The non-CF officer, Groundwork and the community landscaped the area at the base of the Calzaghe Bridge near the Comprehensive school and leisure centre. Thousands of wildflowers and three silver birch trees were planted to improve the space.
- **Oakdale and Penmaen.** Support was given to assist community groups from Oakdale to develop Roger Lewis Woodland, Penmaen into an area where the public can spend time and develop knowledge and appreciation of their natural environment.
- **Pengam, Fleur De Lys and Britannia.** Pengam Primary School were assisted to construct two raised bed planters, creating an outdoor seating area and painting the school's dram. The school is also being supported to build a plastic bottle green house in the school's allotment site, with the help of parents, staff and children.
- **Penllwyn.** Work was undertaken in partnership with Penllwyn Allotment Society and Pontllanfraith Comprehensive School to develop a redundant and disused area of land into a nature/growing space for community use. The non-CF officer and Groundwork are working closely with the community partnership and the Countryside Council for Wales (CCW) to improve the Penllwyn grasslands, which

is a SSSI site. Survey work has identified the need to fell some silver birch trees and clear bracken in the hope of attracting the Marsh Fritillary Butterfly back to the grasslands.

- **Ty Sign.** The non-CF officer and Groundwork held activities at the Ty Sign Fun Day on October 25<sup>th</sup>. Pumpkin Carving and Bird Box building activities were on offer.
- **Risca.** Risca Comprehensive School's eco/gardening club were assisted by the non-CF officer, students from Ystrad Mynach College and local volunteers, to develop six vegetable growing plots using railway sleepers and a number of compost bins were built. The pupils then worked with Risca Leisure Centre to set up a food co-op and now sell their allotment produce every month to the community.
- **Ystrad Mynach.** Rhymney Valley MIND were helped to create a sensory and wildlife country garden for members of the community to enjoy. From April 2011 on, the non-CF officer assisted in developing a sensory garden / small allotment area in the grounds at Ystrad Mynach Resource Centre. The work was undertaken with the support of Groundwork along with clients from the centre, local college students and members of People First.

**Native Tree Bank.** The Native Tree Bank project is another success story from 2010-11 that was replicated due to overwhelming support from partners. In its first year, 12,500 trees were distributed from the Tree Bank, to individuals, community groups, schools, and partner organisations. Last year, 23,500 trees procured and were distributed, far exceeding targets. The trees were all native Welsh species of local provenance (origin), to help restore our precious local biodiversity. Project cost: £10,000. CEQ contribution: £5,000 plus £5,000 contribution from the Tidy Towns Budget.

**Go Native! Native Bulb Planting.** Go Native! was a new project designed to plant native flower bulbs in public spaces around the borough, to help lift people's spirits, improve open green spaces and help our local wildlife too. In total, 30,000 native bulbs were procured and planted to add colour to our communities whilst attempting to encourage indigenous species (native to this part of Wales) of flowers that complement our neighbourhoods and habitats. Total project cost: £10,000. CEQ Group contribution: £5,000, matched with £5,000 from the Tidy Towns Budget.

### **The Great Outdoors Working Group**

The Great Outdoors, or GO Group, aims to increase the safe and responsible use of the borough's countryside and open spaces in order to facilitate healthier lifestyles and citizen well being, whilst ensuring the protection and enhancement of the natural environment.

### **Creating an Active Caerphilly Plan**

The Living Environment Officer continued to represent the Partnership and the Active Environment theme on the Creating an Active Caerphilly (CaAC) task and finish group. CaAc aims to boost physical activity and reduce obesity in Caerphilly. The delivery of the CaAC Plan became the responsibility of the new Well-being Improvement Network (WIN) - one of the new groups created from the restructuring of the HSCWB Partnership. However, the CaAC task and finish group was recalled during the 2011-12 period to review the Chief Medical Officer for Wales's latest guidance on promoting physical activity according to a life course approach. Following the publication of the CMO's report, "Start Active, Stay Active", the CaAC Plan may be modified in order to follow the life course approach, potentially providing guidance for each of the five age groups given, instead of simply "children" and "adults". Active Environment will then form an integral part of all life courses.



## **Walking Steering Group**

The Walking Steering Group, which was set up in January 2011, continued to be a successful way of engaging the borough's walking groups in sharing experiences with each other and enabling them to stay informed of opportunities for training and to participate in events. The group met every 2 months and was well attended throughout the year.

**NHS Forest: Gwent Branch.** The Living Environment Officer continued to facilitate negotiations between a variety of environmental organisations - notably BTCV - and Aneurin Bevan Health Board via Ysbyty Ystrad Fawr (the new hospital in Ystrad Mynach) to look at ways in which the hospital grounds can be used as part of patient recovery through environmental activities. Part of the discussion was around planting more trees on site to contribute to the national NHS Forest scheme, but one of the key proposals was to develop a forest garden for patients and volunteers to grow food plants such as fruit and nut trees and vegetables. Discussions are ongoing.

**Forest Schools.** The Living Environment Officer continues to support the Forest Education Initiative (FEI) Caerphilly Cluster group as its secretary. The Cluster meets regularly to discuss the promotion of Forest School education in the borough. The Living Environment Partnership supports the Forest Schools programme to achieve further benefit from combining living environment and education for life themes of the Community Strategy.

## **Events Programme 2011/12**

Many of our Living Environment Partners were engaged in an entire calendar of events and were particularly busy during the late Spring - early Summer period. The main events were:

**The Big Cheese** (30<sup>th</sup> to 31<sup>st</sup> July 2011). Members of the Group put on a partnership marquee that was based on the Olympics theme for the 2011 Big Cheese festival, Caerphilly borough's biggest public event. The marquee promoted walking, cycling, canoeing and horse-riding. Many health partners got involved, with the Health Improvement Team putting on their fruit smoothie bike and Tenovus brought their Sun Cream Van again this year. This collaboration between environmental and health partners is a particular strength that has been developed by the Great Outdoors Working Group over the last few years and continues to demonstrate the links between the health of our living environment and the health of our citizens.

**Bedwelty Agricultural Show** (20<sup>th</sup> August 2011). The Bedwelty Show was a smaller scale event than the Big Cheese, which had been scaled-back to one day from the previous year's weekend-long event. CCBC Countryside and Landscape Service, the RDP Team and Groundwork Caerphilly teamed up to promote green exercise, the work of the Countryside and Landscape Service, the work of partner organisations, and the Rural Development Plan programme and its goods and services.

Other key events that Living Environment Partners were involved in included:

**Mentro Allan Get Active event** (14<sup>th</sup> May 2011), the last annual Mentro Allan / Groundwork Caerphilly event was held at Parc Penallta and involved lots of outdoor activities such as archery, Nordic walking, bushcraft, climbing and an inflatable obstacle course. Unfortunately, the Mentro Allan projects operating in the borough came to an end in July 2011 after the end of the funding period.

**Big Green Festival** (21<sup>st</sup> May 2011). The second annual Big Green Festival event took place in the grounds of Waunfawr Park. It was a large event, aimed at promoting healthy and sustainable

lifestyles within the local area. There were a broad range of Living Environment partners involved in putting on fun activities for families, including wildlife attractions, sporting activities, music, dance, archery, Nordic walking, plus a range of stalls and workshops. In 2011, the Big Green Festival coincided with the annual Walking Festival, **Walk In Caerphilly 2011** (21<sup>st</sup> May 2011). Walk In Caerphilly features a range of walks to suit all abilities, starting and finishing in Crosskeys near Waunfawr Park. It is a consistently well-attended and successful day, organised and led by the CCBC Countryside and Landscape Service but increasingly involves more partnership working with the local Ramblers Association and a host of local, volunteer-led walking groups.

**Go Wild! Biodiversity Matters** (11<sup>th</sup> June 2011). This annual event was held in Sir Harold Finch Memorial Park, Pontllanfraith, during Wales Biodiversity Week. The aim of the event is to promote biodiversity and how it matters to everyone's daily lives. The event is extremely well attended with a range of biodiversity, environmental and sustainability partners involved in a wide range of activities, who try to introduce people to wildlife and the countryside and encourage people to do something positive for wildlife.

**Teddy Bears' Picnic** (21<sup>st</sup> September 2011) for local children at Coed Bryn Oer (part of Brynbach Park). The event was a celebration of the Plant! Scheme, which plants a tree for every child born or adopted in Wales. The successful event featured a group tree planting, a walk, bush-tucker trial, willow weaving, storytelling and games.

### **Project Bernie**

During the schools' Easter holidays, the Safer Caerphilly Community Safety Partnership and the South Wales Fire & Rescue Service (SWFRS) led a multi-agency partnership initiative, the first of its kind in Caerphilly, to tackle deliberate grass arson in the Greater Bargoed area. The project was funded by the Welsh Government and was based upon experience of a pilot in Tonypany, R-C-T in 2010. Bernie targets the deliberate setting of grass fires, which destroy the ecology of grassland and sometimes woodland habitats. It is based on the principles of social marketing, involved two weeks of diversionary activities, to keep children occupied during the holidays whilst they learned about the harmful effects of setting fires. A total of 287 children between the ages of 11 and 18 were engaged in diversionary activities offered by SWFRS, Caerphilly Youth Service, Countryside Rangers and Newport Gwent Dragons. The project resulted in a 25% reduction in the incidences of deliberate grass fires during the period, based on SWFRS figures for the previous year's Easter period. Over a 6-week period, which included the two-week Easter break, partners undertook 132 high visibility patrols in the Greater Bargoed area, to complement the diversionary programme.

### **The Come Outside! Greater Bargoed Pilot Project**

The Come Outside! Team completed the second year of a three-year pilot project. The Team comprises partners in the CCBC Countryside and Landscape Service, the Community Regeneration / Communities First Teams and the Countryside Council for Wales (CCW). The Come Outside! methodology involves engaging countryside and community development workers in promoting healthy lifestyles through the use of local, accessible green spaces. In the Aberbargoed area, 3 major green spaces are promoted - Aberbargoed Grasslands Special Area

of Conservation, Bargoed Park and Parc Coetir Bargod. During 2011-12, 141 community members volunteered for environmental improvements, 1,334 children attended environmental activities and 20 wildlife habitats were enhanced or created.

## **Allotments**

The SD and LE Team secured an allocation of £11,500 from the Community Assets budget for works to support the Allotments Strategy, which aims to bring disused and redundant plots in particular back into food production. This funding was used to undertake work at:

- Tunnel Row, Newbridge (£8,000). This second phase of works at Tunnel Row allotment in Newbridge enabled the completion of the whole project including land clearance, access road and fencing. The allotment has provided 14 new full-size plots, all of which have been allocated. The allotment has now been handed over to the Islwyn Allotment Federation who have continued to invest further in the site's facilities.
- Gwerthonor, Gilfach (£1,500). Clearance work at Gwerthonor in Gilfach has allowed a further 5 plots to be made available.
- Wyndham Street, Machen (£2,000). Works at Wyndham Street in Machen has released land for approximately 6 plots.

During 2011-12, improvement works have also been undertaken at:

- Bowls allotment, Caerphilly;
- Greenhill, Gelligaer;
- Lower Glyn Gwyn Street, Trethomas;
- Navigation Street, Trethomas;
- Newport Road, Trethomas;
- School Street, Llanbradach;
- Llanfabon, Bedwas.

In total, work around the Allotments Strategy last year created 40 new plots.

## **Climate Change Working Group**

The Climate Change group was set up to look at ways in which the partnership could help improve the efficiency of local natural resource consumption, to mitigate the local causes of climate change, and identify the steps we need to take to adapt to the local effects of climate change.

## **Climate Change Adaptation**

Climate change adaptation is a major area of work for the Partnership and significant resources were drawn into this priority issue during the period.

Adaptation Plan for Caerphilly County Borough. Much of the SD & LE Team's work has been in the initial stages of developing a Climate Adaptation Plan for the borough. Engaging a broad range of Council Service Areas to begin with, a Task and Finish Group has been set up to develop the plan, which will in principle follow the Changing Climate, Changing Places (CCCP) methodologies (e.g. LCLIP and BACLIAT tools). Key officers from across the Council took part in workshops to learn more about how climate change may affect Caerphilly borough in the future and how public services might be impacted upon.

The SD & LE Team has utilised support, funded by the WLGA, from Dr. Alan Netherwood, a leading consultant with a climate change specialism and has led on CCCP with the four Welsh pilot authorities, and who is facilitating Caerphilly's involvement in a second phase of CCCP work in Wales. Further workshops will take place in the 2012-13 period, and service area representatives will be supported to identify service-specific impacts and contribute service area adaptation measures to the overall plan. The Council's work on adaptation now has a policy imperative, with the Welsh Government's Climate Change Strategy for Wales and Adaptation Framework and Delivery Plan, which have arisen from the Climate Change Act 2008.

The service areas involved to date are: Facilities Management and Corporate Property, Corporate Property - Energy, Corporate Services - Information Technology, Engineering Division - Transport, Planning Division - Strategic Planning, Housing, Emergency Planning, Public Protection and Environmental Health, Economic Development, Community Regeneration, Countryside and Landscape Service.

Through the Climate Change Working Group, a broad range of Community Planning Partners will continue to be engaged in the wider Adaptation Planning process, as cross-agency working will be essential to ensure a seamless approach to emergency preparedness and response and long-term strategic planning.

Climate Change Commitment / Climate Diet. The original Climate Change Commitment pledge scheme was modified to be more publicly accessible. It translated loss of carbon into language typically associated with weight loss, in the hope that this would enable more people to understand the woolly concept of carbon and recognize the everyday activities that they can build into their lives to "shed carbon pounds". The scheme retained its three-tier system - Level 1 activities are simple and either low-cost or no-cost, Level 2 involves a bit more effort or a small financial investment, and Level 3 requires a more substantial investment. A large number of Level 1 pledges were signed in the period - 3,404 individuals signed a pledge. 66 individuals were recorded for having signed a Level 2 pledge, although the actual number was in reality higher, as planting a tree in a Climate Change Woodland was deemed a Level 2 action.

Climate Change Woodlands. The Climate Change Woodlands concept was developed as a public engagement tool. It links with the Commitment / Climate Diet scheme, and enables signatories - whether individuals, families, organisations, businesses or schools - to make a pledge to do their bit to tackle climate change and plant a tree as a long-lasting and publicly-visible sign of that commitment. During 2011-12, the project was funded by the Community Assets Group (CCBC Directorate of the Environment).

The Climate Change Woodlands planted in 2011-12 were:

- The Sir Harold Finch Memorial Park Climate Change Woodland was planted as part of the Go Wild! Biodiversity event on Saturday 11<sup>th</sup> June 2011. It proved to be an excellent engagement

opportunity with a lot of families and their children involved in planting their climate change trees. 120 trees were planted at this event, mostly by young children, whose exuberance and interest showed great promise for the future.

- Darran Valley Climate Change Woodland Restoration Project. This was a large project to restore parts of a wind-damaged non-native coniferous forest to native woodland, to provide wildlife connectivity and enable wildlife adaptation to climate change. Major groundwork was required as the site suffered from soil compaction and poor nutrient content. This site could in time prove to be an invaluable exercise in woodland restoration to a climate resilient state.

- Fochriw and Deri Schools' Climate Change Woodland. Event at Parc Cwm Darran. Local school children signed up to the Climate Pledge to plant a tree to help address Climate Change. An existing re-wooded site was layered with younger trees in order to help create a more natural set of canopies which would encourage a great diversity of wildlife.

- Plas Mawr Community Centre Grasslands at Highfields, Blackwood. This project involved school children from Blackwood Primary School and partners from the Council's Countryside Service, Tidy Towns Tidy Places, Parks and Public Services, a Community Payback Team and volunteers from the local community. In total, 550 young shrubs and trees were planted on the day, which included a 90 metre hedgerow and areas of shrub planting.

### **Renewable energy baseline for the county borough**

The Sustainable Development Team in partnership with the Strategic & Development Plan Team undertook a Renewable Energy Baseline Assessment (REBA) for the county borough to inform the preparation of the *Draft Renewable Energy Assessment for Caerphilly County Borough*. The REBA was carried out in accordance with the guidance contained in "Planning for Renewable and Low Carbon Energy – A Toolkit for Planners" which was published by the Welsh Government in July 2010.

The study will help to inform discussions on whether or not a countywide renewable energy target or site specific provision would be appropriate in any future review of the Local Development Plan (LDP). This work will form part of the evidence base for any future revision of the LDP and will also form a useful baseline position for future monitoring.

The first revision of the LDP is likely to take place in 2014/15 unless monitoring of the plan indicates that an earlier review is necessary. However it is not considered appropriate to "do nothing" in the intervening period. The Strategic & Development Plan Team, in consultation with the Sustainable Development Team, have therefore progressed work on a ***Draft Renewable Energy Assessment for Caerphilly County Borough***, which draws on the findings of the REBA. The report outlines the contribution that the county borough is making and can make, towards developing and facilitating renewable and low carbon energy. This is important in terms of ensuring that we are in a position to meet our obligations to produce at least 15% of our energy from renewable sources by 2020.

The report further provides a series of recommendations to facilitate the development of suitable forms of renewable and low carbon energy in order to move towards a low carbon economy and thus help to tackle the causes of climate change.

The report highlights that there are various renewable energy schemes operating throughout the County Borough that are already contributing to the generation of renewable energy.

The County Borough will need to generate the following levels of annual output to meet the necessary reductions by 2020:

- Renewable heat generation - 261,365MWh<sub>t</sub>
- Renewable electricity generation - 55,288.97MWh<sub>e</sub>

It is estimated that the County Borough has the potential capacity to produce around 57% of its renewable electricity generation (*Annual output 57,045.57 MWh<sub>e</sub>*), and 1.2% (*3196.76MWh<sub>t</sub>*) of heat generation, if all the schemes outlined in the report are implemented and become fully operational.

The findings indicate that the opportunities to generate renewable energy are presently geared more toward the production of electricity through PV's, landfill gas and wind generation. Whereas there are only a few schemes that deal with renewable heat generation. This could be due to the fact that there is currently no means by which to register renewable heat technologies – the introduction of the Renewable Heat Initiative should provide an incentive for this registration

The report therefore also highlights the important role the Council has in terms of raising awareness and providing residents and businesses with information on the renewable energy technologies available to them.

Finally the report advances eight recommendations to help facilitate the contribution that the county borough is and can make, towards developing and facilitating renewable and low carbon energy.

### **Developing woodfuel production and use in South East Wales study**

The South East Wales Energy Partnership (SEWEP) commissioned a report to look at the ways of developing woodfuel production and supply in South East Wales. The study concentrates on two main areas – supply and demand; and the ability to balance the two.

Currently only around 25 heat only installations in South Wales operate on woodfuel, using around 2,500 tonnes of wood pellet or wood chip annually. However there are large amounts of feedstock available from a variety of sources, and therefore there is considerable opportunity to increase the number of installations in the South East Wales area. Biomass heat provides the cheapest carbon saving per £ of capital investment and also has the additional advantages of local employment and stimulation of woodland management.

Arboricultural arisings were identified as a potentially large source of feedstock, although there are issues with processing them into premium grade woodfuel. Arboricultural arisings cannot be used to make wood pellet, whereas with appropriate conditioning and processing, can enter the wood chip supply chain.

Wood pellet and wood chip fuel are currently used and the report discussed the advantages and disadvantages of each. Presently there is a high proportion of pellet boilers installed compared to chip boilers, when compared with other areas of the UK. This is likely to change in the future, with large new build projects able to make efficient use of cheaper chip. Other, smaller chip boilers will be installed as the supply chain develops and gives the market confidence in chip as a viable and reliable product.

The Renewable Heat Incentive announced in March 2011 is intended to significantly increase the uptake of biomass heat from renewable sources and will provide a good demand pull, which should stimulate the local supply chain. However the report identified that without intervention to establish production within the South East Wales area, woodfuel will be brought in as pellets or chip rather than being made locally.

The creation of a larger hub was recommended as the best long-term option to develop woodfuel production and use in the area, provided that demand can be developed in line with the growth in capacity. To make best use of arboricultural arisings, a large production hub would need to be supported by a series of smaller timber collection points which could be co-located with other facilities such as waste transfer stations or household waste recycling sites.

The report further recommended a model of the local authorities in the South East Wales area investing in the fixed infrastructure of a site and renting the site to a private sector woodfuel company who would provide the mobile equipment and personnel to operate the site and take the commercial risk.

### **Groundwork Caerphilly**

The SD & LE Team continues to have close links with Groundwork Caerphilly, with the Team Leader for SD& LE acting as an advisor to the Groundwork Board. Support has been provided in 2011/12 to improve links between Groundwork and Services within the Authority, and to promote their work.

Specific support has been provided to Groundwork's Trading Company, GC Enterprises Ltd, also known as the Community Furniture Enterprise. During the third financial quarter a team from within the Authority carried out a detailed financial and operational review and highlighted a number of recommendations. An action plan was put in place to support the enterprise.

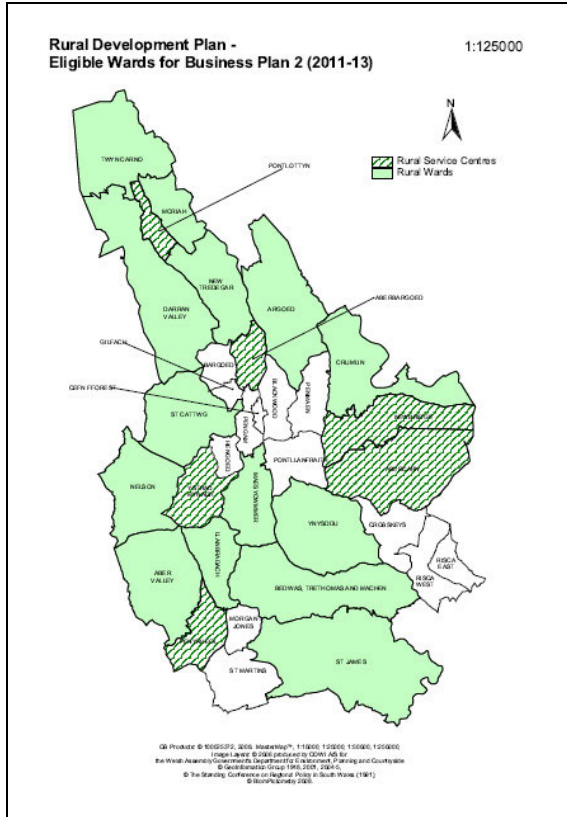
### **RURAL DEVELOPMENT PLAN –**

Caerffili Cwm a Mynydd (Caerphilly Hill and Valley) is the name for the Rural Development Plan (RDP) programme in Caerphilly. It is currently delivering a number of innovative rural projects across the County Borough under the banner of the RDP.

# Sustainable Energy Programme

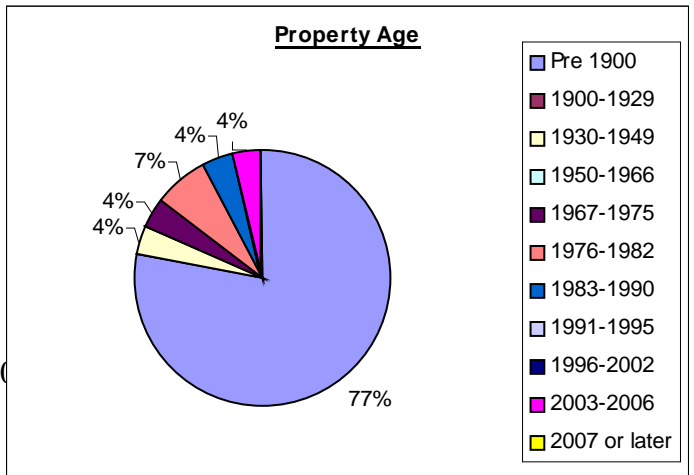
In 2011 two RDP Sustainable Energy Officers were appointed under axis 4 of the plan, which runs until the end of December 2013. The main aim of their project is to engage with farm households and rural businesses to reduce energy use and promote the uptake of renewable energy. Energy costs are rising and energy security is an increasing issue. Through promoting sustainable energy solutions they hope to increase the profitability of farms and rural businesses and to reduce their impact on the environment.

Assistance through the Rural Development Programme is provided in eligible 'Rural Wards' or 'Rural Service Centre Wards':



## Consultation

To help to develop the RDP Sustainable Energy Project, a consultation was carried out



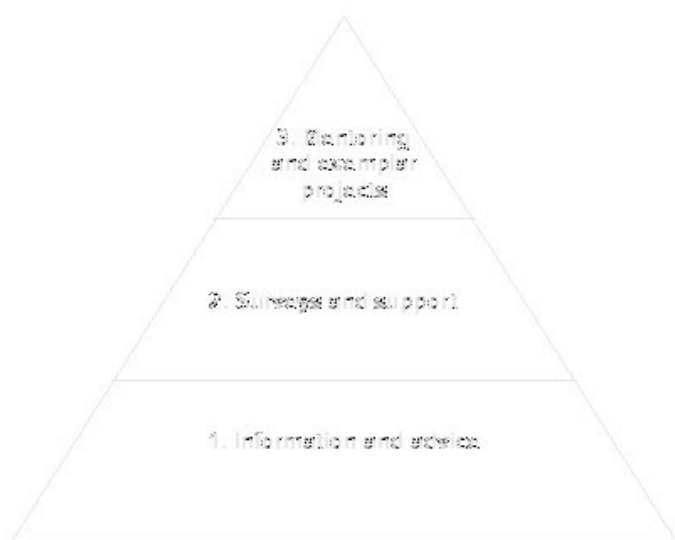


in August 2011, to identify key issues affecting farmers in the borough. The results showed that the majority of farmers reside in pre-1900 hard-to-treat properties that are off the mains gas network.

It also showed that 58% of farmers believed that they spent more than 10% of their income on fuel bills, which places them in the fuel poverty category, and that 68% of farmers were unaware that they could be eligible for financial assistance to make their home more energy efficient.

Only 4% of farm households were on mains gas

## **Help available to eligible farms & businesses**



The RDP Sustainable Energy Team provide a 3 tiered system of support with rural businesses.

### **Level 1. Information and advice**

Level 1 support includes:

- Telephone and email advice on energy efficiency and renewable energy
- Information on grants/loans, signposting to external organisations
- Desktop solar power assessments
- Factsheets

### **Factsheets**

The RDP Sustainable Energy Officers have compiled a number of factsheets on the different renewable energy technologies, including biomass, heat pumps, microhydro, solar photovoltaic, solar thermal and wind. The factsheets are aimed specifically at rural businesses, and include information on:

- The different system types for each technology, for example:  
Wind: Horizontal and vertical turbines  
Heat Pumps: Air source, ground source and water source  
Solar Thermal: Flat plate and evacuated tube collectors

- The issues to consider beforehand
- Costs
- Finance – Business rates, Climate Change Levy

Factsheets are also available on energy efficiency and planning plus information on financial incentives including Feed-in Tariffs and the Renewable Heat Incentive

**Feed-in Tariffs**

The purpose of this document is to provide guidance to farms and rural businesses that are interested in installing certain renewable energy electricity generating technologies and benefitting by receiving the Feed-in Tariffs (FITs).

This scheme replaces the Renewables Obligation (RO) as the main mechanism of support for PV, wind and hydro installations with a declared net capacity (DNC) of 50kW or less (micro installations). It also provides eligible small-scale generators with a capacity over 50kW to 5MW (small installations) the one-off choice of applying under the FIT or the RO.

**What is the Feed-in Tariff scheme?**

It is a Government programme designed to promote the uptake of a range of small-scale renewable and low-carbon electricity generation technologies. It first became available in Great Britain on 1st April 2010 and is administered by Ofgem.

Through the scheme certain Licensed Electricity Suppliers are obligated to make tariff payments for the generation and export of electricity from the following renewable and low-carbon technologies generating electricity from small-scale installations:

- Solar PV
- Small turbines
- Hydroelectricity
- Anaerobic digestion
- Domestic scale wind turbines (up to 10kW)

Ofgem will review the scheme in 2015. A review is due when the 12,000th installation is completed.

**FIT payments**

This financial incentive is comprised of three parts:

1. **Generation tariff:** Owners will be paid for every kWh the system generates. Tariffs vary for technology type and size and will change each year for new entrants to the scheme. It is guaranteed for 20 years, or 25 years in the second half of the 2010-2015 period for the original entries.
2. **Export tariff:** Owners will also be paid for each kWh that is exported to the national grid under the FIT scheme. The export tariff is the same for all technologies. Generators do have the option to opt out of the export tariff if they are self-consuming. The export tariff will be higher than the generation tariff for those who opt out of the export tariff.
3. **Greenhouse gas savings:** Owners will also earn money by using the electricity generated on site thereby reducing the amount they import from the national grid.

**Level 2. Surveys and support**

As part of the process of promoting energy efficiency and renewable energy to businesses, the RDP Sustainable Energy Team are able to offer free energy surveys to businesses whose bills are under £30,000 per year.

The energy survey includes a site visit, during which a questionnaire is completed. Following this a report is generated that provides advice and recommendations on how the owner can improve the energy efficiency of the site, look at suitable renewable energy technologies (if any) and provide approximate costs and paybacks.

**Sector support**

As part of the programme support is also provided to sectors identified within the overall RDP programme, these include tourism, timber & craft and food.

## **Caerphilly Tourism Association (CTA)**

A presentation has been provided to the CTA on renewable technologies and the financial incentives available to encourage the uptake of installations for members.

The presentation provided information on how the various technologies work, the best locations for them, and information on the Feed-in Tariff and Renewable Heat Incentive. It also provided an update following the Comprehensive Review Phase 1 – Tariffs for solar PV where the Government confirmed a number of amendments:

- Reduced tariffs for all PV with a Total Installed Capacity (TIC) of 250kW or less
- The introduction of new 'multi-installation' tariffs
- The introduction of new energy efficiency requirements

As a result of the presentation, support and energy audits are being provided to specific tourism businesses to encourage them to operate more sustainably and to reap the financial benefits of reducing energy consumption.

## **Links to other support**

A key element of the work to identify links to other programmes and to promote the benefits to farms and rural businesses. Links have already been made with Groundwork, the Energy Saving Trust (EST), Carbon Trust, Farming Connect, Nest programme, Ynni'r Fro, Building Research Establishment and National Farmers Union.

## **Nest**

Nest is the Welsh Government's fuel poverty programme that is managed by British Gas with the Energy Saving Trust managing the telephone calls from people looking to benefit from Nest support. It is available to people in Wales who are in receipt of a means tested benefit and living in the hardest-to-heat homes (F or G rated). Due to the lack of awareness of energy efficiency schemes within the farming community a meeting was arranged in October 2011 with the local Partnership Development Manager and Outreach Advisor to discuss working with them. It was agreed that we would promote the Nest scheme through a mailshot and also complete the Home Energy Checks required for applying to the scheme.

A letter was sent to all farms in the RDP eligible wards. It introduced the Nest scheme and included the eligibility criteria and typical improvements for those households that qualified. Those who were interested in the scheme were advised to contact the Sustainable Energy Officers for further information. When residents telephoned a brief assessment was carried out to indicate if the household qualified for Nest. If a property had characteristics of an F or G rating, a visit was organised to complete a Home Energy Check (HEC) and to provide in-depth information, both on the RDP project and energy efficiency measures.

Following completion of the HEC it was emailed to the Partnership Development Manager. A report was then generated to determine the likelihood of a householder living in an F or G rated property. If the property qualified it was passed to a British Gas assessor who would then carry out a more in-depth survey (rdSAP) to confirm a household's rating and recommend the most appropriate energy improvement measures suitable for the home and the applicant, using bespoke software.

If the house did not qualify for Nest, advice was given into the best ways to save energy in the home, grants that were applicable and also signposting to external organisations.

### **Level 3. Mentoring and exemplar projects**

The 3<sup>rd</sup> tier of support involves detailed support on specific projects from the Sustainable Energy Officers. The aim of the development of exemplar projects is to demonstrate good practice and to showcase sustainable energy projects.

#### **Maes yr Onn - Off Grid Living**

The first Exemplar represents a unique opportunity to showcase renewable energy technologies in a domestic farmhouse located within a completely off grid setting, near Manmoel. The design is inspired by the traditional Welsh longhouse and compliments the upland setting of the rural area.

Maes Yr Onn Farm has existed as a separate farm within Manmoel since prior to 1825 until demolition in 1981. Outline planning permission was granted in May 2011 to construct a detached two-storey dwelling adjacent to existing farm buildings at Maes Yr Onn Farm. This will enable effective day-to-day management of the farm and stock and provide an opportunity for further expansion of the business commensurate with the mountain grazing rights enjoyed by the farm.

Maes Yr Onn Farm lacks mains connection of electricity, gas, water or sewage services. This provides some difficult challenges in integrating and balancing energy production and use within the property, but also some opportunities to promote sustainable solutions to energy/resource use and energy generation issues.

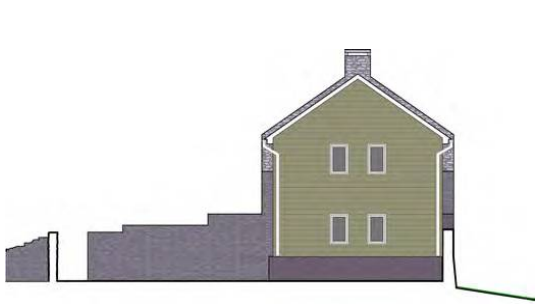


The Sustainable Energy Officers and Building Research Establishment (BRE) have been working with the Client in order to achieve the following Aims.

- To provide a renewable energy generation and water resource solution in an off grid location
- To undertake energy use modelling and reduce occupier resource consumption within an off grid setting through lifestyle changes
- To use the lessons learnt as a model for replication of other off grid systems in the future.

The project involves some major challenges including balancing the various technologies, and ensuring compliance with all appropriate regulations including planning and the Code for Sustainable Homes Level 3

The BRE were commissioned to undertake the detailed design of the project with a brief to deliver a low energy, sustainable family home inspired by the Welsh long house style. All design work was undertaken by Andy Sutton Associate Director, BRE South West, also President, Royal Society of Architects in Wales (part of the Royal Institute of British Architects)



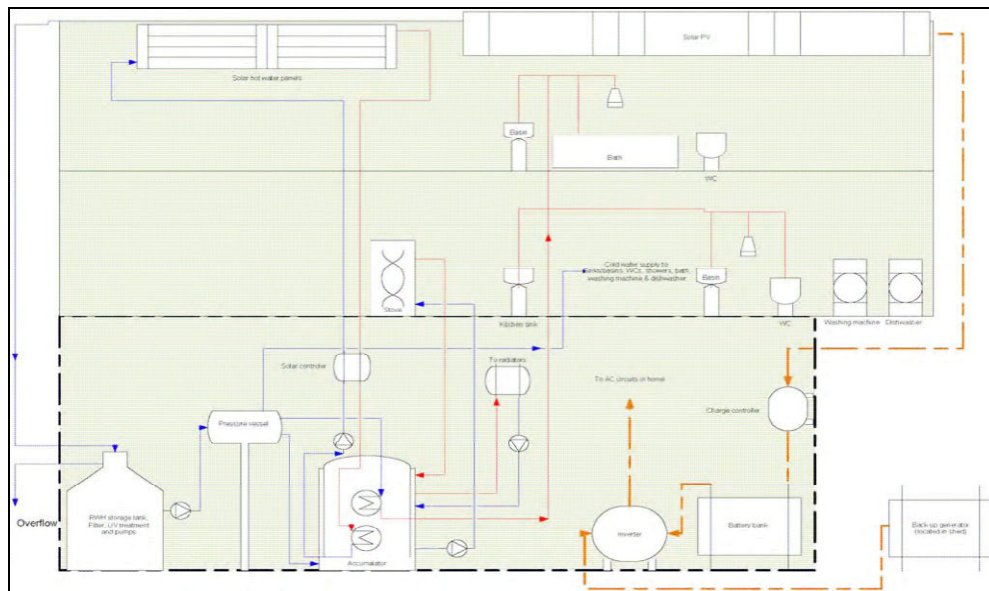
East Elevation



North Elevation

As Maes Yr Onn will be an “off grid” house, the house will consequently have a minimal “footprint” on the wider environment. In order to achieve this level of autonomy, the house has been designed to minimise its demand for energy and waste, and subsequently to generate/collect from the natural resources available and store for use.

A concept diagram of the renewable energy system is shown below



The key features include a photovoltaic array, battery storage, solar thermal panels, wood burning stove, thermal store and rainwater harvesting. The renewable energy and water solution has been modelled and designed for this site specific to the client’s requirements. It is anticipated that



the lessons learnt on the development of this project, particularly around reducing energy use and balancing technologies will be used to inform other projects.

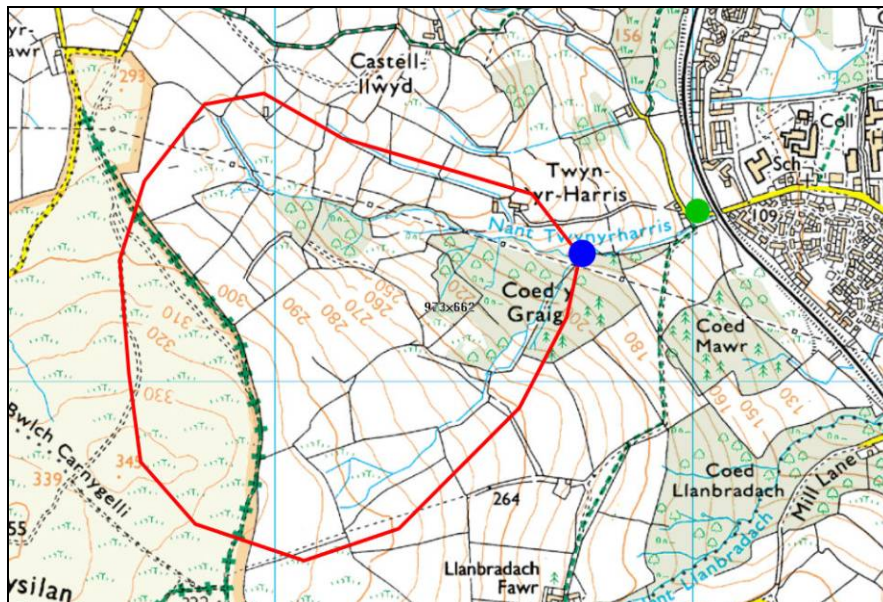
## Hydro Viability Overview in Caerphilly County Borough

The second Exemplar aims to develop micro hydro schemes within the county borough. Working in partnership with Caron Trust Wales, hydro specialists, Locogen were appointed to complete a hydro viability study and overview of the opportunities for hydroelectric generation from high head and low head systems within the county borough.

The aim of phase 1 of this study was to carry out a high level screening study of the area to assess the viability for low and high head hydro developments. The consultant carried out a desk based high-level assessment of all appropriate rivers and streams in the Caerphilly Borough area for hydro energy development potential.

Following this screening study, 5 priority sites were shortlisted for preliminary feasibility studies (initial assessments) to assess the potential in more detail.

The following illustration shows a sample screening site used as part of the desktop feasibility. The red area shows the catchment area, the blue spot the intake location, the green spot the potential powerhouse location



The following photograph shows “Gibbs Weir” a potential low head site identified by the study



For the 5 sites selected for a preliminary feasibility assessment, the following will be carried out:

- A resource assessment (head, flow rate etc) and assessment of potential generation capacity;
- A preliminary system design and specification for appropriate type and scale of technology;
- A financial appraisal of the hydro development;
- Advice on any planning and environmental issues associated with the development;
- An assessment of any existing electrical usage and infrastructure;
- Preparation of a business case outlining options (using carbon and cost data)
- An Assessment of procurement options involved in the scheme
- Identification of key barriers and risks to the installation and long term future operation / maintenance of the identified options and
- Recommendations on most appropriate technical / financial solution

## **Hollybush**

Hollybush is the largest community in the county borough not connected to the mains gas network. The SD & LE Team commissioned BRE Wales to carry out a study to identify potential energy efficiency and renewable energy solutions for the village.

The study looked at 120 houses in the area and found that 82% are solid wall, 17% are 1970/80s cavity wall construction and 2% are post 2003. The main fuel types are a mix of LPG, oil, electricity and solid fuel (either wood or coal). Residents have previously made requests to extend the gas main to serve the village as they feel their current energy supplies are becoming very expensive. Extension of the gas main has been investigated and is considered too costly to be viable.

The report gave recommendations to improve the energy efficiency of the properties (installation of external or internal wall insulation to solid wall dwellings and the upgrade of oil and LPG boilers to modern, efficient heating systems) and also looked into viable renewable energy options.

The report identified a range of funding options. These included individual means-tested grants for energy efficiency measures; area based whole village energy efficiency grants and support available for community renewable energy projects through mechanisms such as the feed-in tariff and external investors.

Two information events were organised for the community (residents, businesses and farmers) and were based at Hollybush RFC. The first on 14 September 2011 reported back the findings of the study to the residents, giving initial options and funding opportunities on energy efficiency and renewable technologies. Talks were given from different organisations (BRE Wales, Nest, CCBC RDP, Ynni'r Fro) and a short film was shown on a Scottish community energy project based in Fintry. This was followed by one to one discussions with residents who had specific queries.

Following this Hollybush was selected to be one of the two project proposals for Caerphilly County Borough Council under Arbed Phase 2 (funded and managed centrally by Welsh Government). A meeting was also arranged with a local landowner who was interested in wind turbines, possibly on a community scale.

The second event was held on 02 November 2011 in order to determine the level of interest in progressing with a Welsh Government Arbed Phase 2 bid for the village in order to address fuel poverty. CCBC Officers from Housing attended along with the RDP Sustainable Energy team. Sign up sheets were available for those people to express their interest in Nest, Arbed Phase 2 and a community energy project (e.g. wind turbine)



## Monitoring and measuring progress

The SD & LE Team reports to a number of groups and against the indicators in several strategies within the Authority including:

- The Council’s Corporate Improvement Plan **as part of Improvement Objective 8: “To reduce our carbon footprint and to improve our sustainability”**.
- The Planning Division’s Service Improvement Plan.
- The Authority’s Outcome Agreements – Outcome Agreement 8 – Enhancing the quality and enjoyment of the natural environment

Some selected indicators for the work of the Team are set out in the table below:

Indicator	2008/09 Actual	2009/10 Actual	2010/11 Actual	2011/12 Target	2011/12 Actual
The number of organisations that have signed the climate change commitment	New PI	New PI	11	40	50
The number of individuals that have signed the climate change commitment	New PI	New PI	566	1,500	3,489
The percentage of staff that travel to work in a car on their own	66.9%	Collected every 2 years	70.3%	Collected every 2 years	----
The average level of understanding of SD by our staff	2.5	Collected every 2 years	2.5	Collected every 2 years	----
The number of staff on the ‘Cycle to Work Scheme’	New PI	New PI	104	150	221
The percentage of schools with the highest (Green Flag) award under the Eco Schools programme	32%	39.5%	51.6%	51.6%	58%
The number of education for sustainable development training with schools	New PI	New PI	128	100	102

% Municipal waste we send to landfill	65.29%	52.7%	45.99%	45.99%	Awaiting data
% Households participating in the kerbside recycling scheme	57%	66%	68%	68%	Awaiting data
Number of staff on our "Car share database"	New PI	New PI	293	350	321
Number of sustainable travel events held	New PI	New PI	10	12	13
Number of Climate Change Woodlands created	New PI	New PI	1	2	3
Farms and rural businesses advised on sustainable energy issues	New PI	New PI	New PI	20	28

## **Funding**

The Sustainable Development & Living Environment Team **secured an additional £161,641** to increase the 2011/12 budget from £31,800 to £193,441. This includes:

- **£25,000** for Caerphilly Environmental Quality projects from the Community Assets budget
- **£37,166** from Living Environment Partners to match fund CEQ projects
- **£19,990** secured in partnership with United Welsh Housing Association to develop the Caerphilly Solar Schools Education Resource Pack.
- **£11,500** for Allotment projects from the Community Assets budget
- **£3,500** for Climate Change Woodlands projects from the Community Assets budget
- **£500** from the WLGA towards developing the Welsh Green Grin o Meter.
- **£1,180** from the Health Improvement Team towards the Pedometer Challenge
- **£2,150** from Let's Walk Cymru e British Heart Foundation towards the Pedometer Challenge
- **£9,995** from Sewta for a Pool Bike Scheme
- **£14,000** from the Building Research Establishment contribution to RDP exemplars

- **£2,500** from the WLGA consultancy for Climate Change Adaptation work
- **£21,100** from the Countryside Council for Wales towards Community Strategy delivery
- **£4,280** from Heads of the Valleys for renewable energy behaviour change Study
- **£4,390** from Heads of the Valleys towards a study to identify opportunities for hydro schemes
- **£4,390** from the Carbon Trust towards a study to identify opportunities for hydro schemes in the county borough

**£161,641 Total secured**

### **Sustainable Development and Living Environment Team**

The Sustainable Development and Living Environment Team is currently made up of 5 officers.

#### **Paul Cooke: Team Leader, Sustainable Development and Living Environment.**

Paul is responsible for coordinating the work of the Living Environment Partnership Theme of the Community Strategy and for leading on Sustainable Development issues with the Authority. This includes raising awareness of living environment and sustainability issues and ensuring that the principles are embedded in the policies and procedures of the Authority.

#### **Tracy Evans: Education for Sustainable Development Officer.**

Tracy became the Education for Sustainable Development Officer in October 2004, having previously worked in environmental waste management. Her main role is to raise awareness and understanding of Education for Sustainable Development and Global Citizenship across the county borough as well as supporting the sustainable development work within the authority.

Tracy works closely with the county borough's schools on the Eco Schools initiative, and has been instrumental in continuously improving the standards of the eco-schools programme and school ESDGC work through training the pupils, teachers, headteachers and governors in sustainable development and global citizenship issues.

#### **Natalie Davies: Living Environment Officer.**

Natalie was appointed the Living Environment Officer in June 2008, having previously worked in environmental management in the Civil Service/defence manufacturing industry. The role of Living Environment Officer was created early in 2008 following a review of the original Living Environment Co-ordinator post and Natalie was the first LEO. She is responsible for supporting the environmental aspects of the Community Strategy, the work of the Living Environment

Partnership and the implementation of the Living Environment Strategy, which will in future form an integral part of the Single Integrated Plan.

**Kelly Silcox: RDP Sustainable Energy Officer**

Kelly was appointed as one of two RDP Sustainable Energy Officers in May 2011, having previously worked for an environmental charity, providing energy advice to individuals and businesses. Her main role is to engage with farming and rural businesses in the county borough on energy issues, raising awareness of the implications of climate change, and promoting sustainable energy solutions.

**Melanie Phillips: RDP Sustainable Energy Officer**

Melanie joined the Team in 2011, having worked for CCBC for 12 years, providing environmental support and advice to businesses in Caerphilly. Melanie's role is also to engage with farming and rural businesses in the county borough on energy issues, raising awareness of the implications of climate change, and promoting sustainable energy solutions.