



Sustainable Development & Living Environment Team

Annual Report 2012 - 2013



A greener place Man gwyrddach



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Introduction

Sustainable development is one of the central principles guiding the work of Caerphilly County Borough Council. The Community Strategy and Single Integrated Plan provide the overarching 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 (SD & LE) Team in 2012/13. The Team work in partnership with the Sustainable Development Advisory Panel (Members Panel), Sustainable Development Core Group (Officers & Members 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 SD & LE Team, Sustainable Development 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
- Regeneration & 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 continue to raise awareness of the key sustainable development issues, which affect the Authority, and implement projects designed to demonstrate the principles of sustainable development to improve the sustainability of the Authority.

The Education for Sustainable Development work continues to go from strength to strength, demonstrating the benefit of employing a dedicated ESD Officer.

During 2012/13 the Team has undertaken joint projects and given specific support to 7 Services including Planning, ICT, Procurement and Housing.

The Team continue 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 2012/13 this has included co-ordinating the living environment input into the developing Single Integrated Plan.

The Team continue 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 2012/13 include:

- 62% of our schools have achieved a Green Flag (the highest award) under the Eco Schools programme. Twenty-five schools have achieved their second Eco School green flag award, with thirteen schools also achieving their third flag and working towards their platinum award. Four schools have achieved the coveted Eco Schools Platinum Award, three primary and one infant school.
- 245 Multi Function Printers (MFPs) have been deployed across the Authority to consolidate local printers, scanners and fax machines onto single devices, replacing some 1,300 individual devices. The duplex rate of 68% has saved 14.3 million pages since MFPs were introduced.
- A Pedometer Challenge was run across the Authority to encourage more active lifestyles. In total 725 employees took part, and collectively they walked 3 times around the world during the 5 week challenge.
- 5,069 residents of the County Borough have signed a pledge to combat climate change.
- The council have continued to hold the Welsh Government/Sewta backed All Wales Travel Plan Award at Gold Level, a scheme introduced

to recognise best practice in sustainable travel planning.

- 191 vehicles have been delivered via the The Council's Salary Sacrifice Car Scheme. On average the new vehicle has resulted in a 35% reduction in CO₂ emissions compared to the vehicle it replaced.
- Sustainable Energy advice was given to 28 farms and rural businesses in 2012/13
- The SD & LE Team secured a total of £240,984 funding for projects in 2012/13.

Sustainable Council



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. In 2008 the Council published its 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 CO₂ 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 country borough to enable them to reduce their greenhouse gas emissions
- d. Reduce the impact of our travel and transport to reduce carbon emissions.

Service Improvement Plan, Sustainable Development Statement

Each year every Service within the Authority produces a Service Improvement Plan, which sets out what they will achieve and how they will deliver their services. The Service Improvement Plan process has a key role to play in ensuring that Services are considering economic, social and environmental issues related to their Service delivery.

Since 2004/05 each service has been required to complete the SD integration Tool as part of the Service Improvement Plan process. The Integration Tool was a simple self-assessment form for Services to complete before writing their Service Improvement Plan. It enabled them to assess their contribution to the 28 objectives of the Community Strategy. The 28 objectives taken together are an expression of sustainable development in Caerphilly County Borough, therefore by completing the tool services were assessing their contribution to the overarching principles of sustainable development and equalities.

In 2006/07 the Integration Tool was updated to require evidence in support of scores, partly in response to the new Wales Programme for

Improvement requirements.

For 2013/14 reporting we have replaced the previous SD Integration Tool with a new SD Statement for Services to complete. This was for 3 main reasons:

1. The previous tool asked Services to score their contribution to the 28 objectives of the Community Strategy. From March 2013 the Community Strategy has been replaced by a Single Integrated Plan, which will contain 6 areas for improving and reporting.
2. The Welsh Government are progressing proposals for a Sustainable Development Bill which will require local authorities to make SD their central organising principle, and to evidence how they are doing this. The SD Statement will provide key evidence that this is

being done.

3. The Welsh Government have issued statutory guidance on the requirements for reporting under the Climate Change Act 2008. Local authorities are required to report annually on achievements and progress on climate change adaptation. The climate adaptation section of the SD Statement will provide the information required to compile a corporate climate adaptation report.

Each year the SD & LE Team supports services to complete the Service Improvement Plan, and comments on how it addresses the key sustainability issues relating to that Service.

The work of the SD & LE Team contributes to the Regeneration & 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. Enabling 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 2012/13 the Panel was chaired by the Cabinet Member with responsibility for Sustainable Development. 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.

When Peter Davies, Climate Change Commissioner for Wales and Sustainable Futures Commissioner for Wales attended SDAP he 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."

[\(Click to see Peter Davies on You Tube\)](#)

In 2012/13 SDAP met 7 times and received reports on a variety of topics including:

- Climate Change Adaptation
- Renewable energy data and implications for the County Borough
- Biomass
- Fleet Management Issues
- Feasibility of hydroelectric schemes

The Panel also received presentations from outside organisations including the Forestry Commission and SSE.

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.

We report annually on our work on sustainable development and progress towards achieving our commitments under the SD Charter.

More information on the Welsh Government's Sustainable Development Charter can be found in the pdf below:

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

This work is highly regarded and has resulted in visits, including a delegation from Japan in December 2011. The delegation included representatives from the National Planning Division and Mitsubishi Research Institute. They met with officers from the council's Sustainable Development team and SDAP to find out more about Caerphilly's innovative Sustainability Index.

Sustainable Development Website

The [Sustainable Caerphilly website](http://www.sustainablecaerphilly.co.uk) 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. The intranet site is updated as and when required to ensure staff are aware of new initiatives.

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 have been involved with in 2012/13 include:

- 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



- 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
- Establishing Green Team notice boards

Sustainable Travel

Travel and transport account for 16% of the UK's emissions of CO₂. 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 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 has continued to hold 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 is recognition for a variety of sustainable travel initiatives including undertaking a staff travel survey; introducing a staff car share scheme; and 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.

Sustainable Travel Events

11 events promoting sustainable travel, highlighting the support and initiatives available to staff to enable them to travel more sustainably were run in 2012/13. Cycle to work salary sacrifice road shows were held at the main council offices throughout the year and a selection of events were held to promote National Bike Week.

National Bike Week

National Bike Week (June 18th to 22nd 2012) 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, free bike breakfasts and lunches and a lunchtime mountain bike ride. Thirty staff that cycled to work during the week received a free bike breakfast or lunch.

A Bike Calculator was promoted during the week to show staff how much money they could save and how many calories they could burn by cycling to work.

[\(Click to see the cycle challenge on You Tube\)](#)

National Standards Instructor Cycle Training

The ESD Officer completed a National Standards Instructor Cycle Training course in March 2013 to enable the SD Team to run cycle training in-house for staff during National Bike Week and to provide cycle training as and when required for staff using the pool bike scheme.

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 during 2012/13. To date 291 employees have signed up to the scheme.

www.cyclesolutions.co.uk/caerphilly

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 were installed at Highways House and Tir Y Berth during 2012. The cycle shelters were funded by Sewta, as part of the sustainable travel grant awarded to provide pool bikes and cycle storage facilities for staff.

The SD team are now looking to purchase pool bikes and equipment to set up pool bike schemes at Tir Y Berth and Penallta House to support staff cycling to and from work.

Locker facilities are also being installed at Cherry Tree House to support staff cycling to and from work or doing activities during the lunch time period.

Pontllanfraith Pool Bike Scheme



Pontllanfraith House has 13 pool bikes (8 mountain bikes and 5 electric bikes) available for staff to use for leisure purposes during the lunchtime period and after work and to cycle to and from 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 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 continue 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 342 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 CO₂ output from vehicles used on business mileage and in commuting to work, the council has established a

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 scheme enables staff to be provided with a new low emission car (CO₂ 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 have worked with HR and Payroll to ensure that systems are in place to capture information on the CO₂ savings achieved by the scheme.

At the end of March 2013, 191 have been delivered. They cover a wide range of manufacturers. The CO₂ 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 28th to March 3rd 2013, 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

All it takes
first
step
is the

The challenge was a huge success attracting 79 teams and 74 individuals. Teams consisted of between 2 and 15 people, with a total of 725 people participating in the challenge.

As well as promoting walking, staff were also encouraged to participate in other forms of exercise, including running, aerobics, cycling, tennis,

gardening and housework. To support this the estimated equivalent steps for a variety of activities were included in the pedometer challenge user guide.

The challenge highlighted some key facts including:

- The total distance walked by participants during the five weeks of the challenge was 73,200 miles, approximately 3 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 6,333, 3,667 steps below the recommended average number
- Each team member of the top team walked an average of 182 miles during the challenge
- The top individual walked approximately 316 miles during the challenge

Following the success of the second CCBC Pedometer Challenge the aim is to run an annual challenge to continue to raise awareness and understanding of the health benefits associated with walking as well as exercise in general to staff.

There is also an opportunity to run a 5-day active challenge during the summer to encourage staff to get active during the warmer weather.

Cycle Maps Project

The SD Team are currently working in partnership

with the CCBC Transport section and Sustrans to develop local cycle maps for the Caerphilly County Borough.

The project involves producing a set of user-friendly maps highlighting details of the cycle routes across the County Borough. This will include a plan of routes that will give those living, working and visiting the County Borough details of routes they can access for walking and cycling, as well as to link to other facilities.

They will help encourage more journeys to be made by walking and cycling to help reduce car use in and around the Caerphilly County Borough. The maps will be designed so they can be downloaded and printed directly from the website, and when funding is made available they will be printed ready to be distributed to residents and visitors as and when required.

Fairtrade Fortnight 2013



During Fairtrade Fortnight (February 25th to March 10th), the Fairtrade message was promoted to staff via the intranet. Posters and leaflets were also displayed in the main buildings to highlight the importance of supporting Fairtrade. The aim was to raise awareness of the issues around Fairtrade and encourage staff to take a step and change one item in their weekly shop to a Fairtrade item.

Supporting Services

A key element of the work of the SD & LE Team is to support individual Services within the Authority to address sustainability issues. In 2012/13 specific projects were undertaken with 5 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.

SD training for planners

Worked 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. which was delivered by trainers from the University of Western England. Thirty officers attended from within the Planning Division, including Development Control, Strategic Planning and Urban Renewal Sections.

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,

ICT currently represents about 2% of CCBC's total CO₂ 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.

Multi Function Printers

To date 245 Multi Function Printers (MFP) have been deployed across the Authority. The last remaining copiers in libraries were replaced in December 2012. An average of 350,000 sides of paper were printed per week, 80% in mono and 20% in colour. The duplex rate of 68% has saved 14.3 million pages (equivalent to 1700 trees or 71 tonnes of paper) since MFPs were introduced in 2008. The centralisation of paper and toner processes has led to a reduction in ordering and invoicing for the Authority and a reduction in photocopier leases and contract management.

The ICT Team have been working closely with Welsh Government's (WG) Chief Information Officers Team on testing out a revolutionary toner saving software product called "PretonSaver" and drafting a print strategy report for the public sector in Wales. Following visits to several public sector organisations, Officers from WG have been highly impressed with the level of management and analysis of data that CCBC have developed as part of its print strategy and as a consequence, Caerphilly have been selected to lead the tests of the PretonSaver software.

Based on a unique patented Pixel Optimizer technology, PretonSaver uses advanced algorithms to identify and delete pixels that are not necessary to maintain high quality level printing, thereby dramatically reducing toner and ink usage.

Consumable levels are monitored across network printers and page costs are constantly calculated and reported, allowing visibility and monitoring of saving levels.

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.

Significant testing of the product over a number of months have been undertaken using scientific weighing scales. At 50% and above the reduction in quality of the printed output was noticeable; at 35% the quality was slightly degraded but not significantly so and at 25%, the quality could not easily be differentiated from the original print. The Authority have subsequently procured the product via a framework agreement and it is now deployed on all CCBC's PCs, realising savings in toner usage of approximately 20%. The PretonSaver product included an option for power management, which has also been deployed onto all Caerphilly PCs and is currently collecting data to establish the potential savings on power management.

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.



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 as well as identify the incorporation of Targeted Recruitment and Training (TR & T) and Living Wage requirements into public sector contracts as being one of the ways it could help stimulate the local economy.

The Authority currently spends in the region of £180 million on third party contracting for goods, works and services. Therefore, it has taken the belief that it is vital to use the third party spend constructively to assist regeneration within the Borough. Not only is Caerphilly looking at the TR & T element within contracts, but also boosting the local economy with the use of a local supply chain, local contractors and wider Community Benefit initiatives where possible.

Procurement Officers attended training by Value Wales on 'Community Benefits – Delivering Maximum Value for the Welsh Pound', 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 either be included as a Core element of the contract or a Non Core element of the contract for consideration. In order to achieve this Caerphilly County Borough Council has committed to using purchasing opportunities to increase access to jobs and skills opportunities (through Targeted Recruitment and Training) for local people, where applicable, by:

- Considering what recruitment and training, sub-contract and supply chain opportunities could be obtained from relevant contracts;
- At the commissioning stage, include work experience, training, equal opportunities, recruitment requirements and supply chain

opportunities in its specification, where it is considered appropriate;

- Include other social and environmental matters in contract specifications, where it considers this to be appropriate;
- Consider opportunities to recruit and train long term economically inactive persons as part of the workforce delivering projects;
- Consider training opportunities such as apprenticeships / NVQs, work experience to schools and colleges;
- Advertising sub contracting opportunities for SMEs via Sell2Wales; and
- Community projects, community engagement & educational programmes.

As a result of the above, Caerphilly County Borough Council have now adopted TR & T and Community Benefit initiatives and these will be considered as part of the procurement process on a project by project basis.

This approach has been adopted most notably within the following Caerphilly CBC projects:

- Cwm Ifor Primary School
- St Ilans School Redevelopment (Phase 1)
- Bargoed Town Centre Regeneration,
- South East Wales Highways Contractor Framework
- Ysbyty Ystrad Fawr Highways Improvement Contract
- Term Service Contract for Carriageway Re-Surfacing

- Street Lighting
- Archaeology Tender for Llancaiach Fawr
- Risca Public Artwork Commission
- Provision of Library Refurbishment at Abercarn
- Framework for the Provision of Planning Services Landscaping Works
- Hanbury Baptist Café Tender
- WPC Groceries Provisions and Frozen Foods Contract
- Supply and Distribution of Fresh Pasteurised Milk
- Occupational Health
- Wood Waste
- Processing of Recyclable Materials
- Project Gwyrdd

Going forward Community Benefits and TR & T will be incorporated into the procurement process on a project-by-project basis, such as the following:

- Bargoed Cinema Construction
- Heads of the Valleys (HoV) Organics Procurement
- WHQS Programme

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 Business Wales.

The Welsh Government's new Business Wales

service will help support the sustainable growth of small and medium enterprises. Business Wales is a dedicated service that provides businesses with information, guidance and support directly, and from the private, public and third sector.

In 2012/13, 185 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 CO2 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%)

Making an adjustment to incorporate Ty Penallta and Tredomen Data Centre into the carbon reduction baseline figures, it can be shown that the weather corrected figures to the year-end for 11/12 showed a 14.99 reduction against a target of 13.5%.

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 in 2012/13, including:

- Welsh Water/Aqualogic surveys in schools and leisure centres
- Building energy management training at Pontlottyn Primary
- Advice on water heaters to Tyn Y Wern Primary school
- Governor training at Oakdale Comprehensive
- Joint funded energy efficiency training through the carbon trust and a recognised consultant for all leisure centres
- Energy efficiency presentation to the eco group

at Blackwood Primary

- Welsh Water/Aqualogic funding for improvement technology at schools and leisure centres
- Winter freezing advice on the intranet
- Advice to all Half Hourly electricity sites on night time electrical consumption within their buildings
- A series of events throughout Climate Week, which included further training by the energy management team and the carbon trust.

During the year, 17 energy audits were completed and presented to building managers.

There has been 106 Display energy certificates generated and distributed across the authority.

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 CO₂ 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 insulation in all schools being upgraded, and there has already been a number of technology upgrades to reduce carbon emissions through invest to save schemes throughout 2012/13.

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

In 2012/13 the LAEF scheme was instrumental in the application of the following technologies.

- Highways: street-lighting control upgrade, with an investment of £75k
- Building energy management systems installed at Castle View Home for the Elderly
- New swimming pool cover at Bedwas leisure Centre
- Valve and flange insulation at:
 - Bryn Primary
 - Newbridge Leisure
 - Plasfelin Primary

A significant LAEF project was the £26k upgrade of energy efficient lighting and controls at Islwyn Indoor Bowls centre. This has resulted in reduced electrical consumption and improved lighting for the bowling members.

These LAEF projects have contributed lifetime carbon savings of 1,458 tonnes.

In addition to the LAEF schemes and via funding of £200k through the carbon group and asset management, planning began on a new heat recovery system for Risca leisure Centre which will be implemented in 2013. The heat recovery system will have a payback rate of approximately 8 years and will provide significant long term carbon savings. The system will also make the pool area more comfortable for users by balancing the pool and air temperatures. This will rectify a long standing issue at the centre.

Asset management

Cwm Ifor Primary has been completed and is now operational. The school has many energy efficient properties, including up rated insulation levels beyond building regulation requirements. There is a small PV scheme rated at 17kWp and there is energy efficient lighting and controls throughout. The school has sophisticated Building Energy Management Systems that can actually open and close windows to control ventilations rates. As a result of this there is a very low air emittance value

known as air leakage. The windows are double glazed and argon filled and effects of these have resulted in a BREEAM standard of excellent.

St Ilans Phase 1 is a redevelopment of an existing comprehensive school.

It has higher than needed insulation levels. There is a small PV scheme and the building was also considered for a solar collector. Phase 1 is expected to complete in 2013.

Renewable Technology

The Cwmcarn hydroelectric scheme is still under consideration after a 6-month flow rate monitoring process. The final stage of the on site monitoring will provide detail on the most economical size hydro scheme for the site and will include cost data for the authority to evaluate.

There have been two small-scale PV schemes at Cwm Ifor Primary and St Ilans phase 1.



Ynysddu Primary School is being considered for a biomass boiler, a decision has yet to be made on this.

Planning permission has been granted for two 2.5MW wind turbines on Oakdale industrial estate. These are likely to be installed in 2013.

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 & LE Team in 2012/13.

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.

In 2012 Council tenants voted to stay with the Council. As a result a programme of work has been put in place to achieve the Welsh Housing Quality Standard for our council homes by 2019/20. In 2012/13 almost £18million was spent on the WHQS programme. £5 million of energy efficiency works, as well as £3 million on central heating

improvements, £2 million on rewiring, with more than 500 properties benefitting from new kitchens and bathrooms.

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.

Arbed Programme.

Arbed is the Welsh Government's Strategic Energy Performance Investment Programme. It was introduced in 2009 to bring social, environmental and economical benefits to Wales and co-ordinate investment into the energy performance of Welsh Homes.

The SD & LE Team contributed to the successful bid for an Arbed project at Fochriw. This project has recently commenced on site and being project managed by Melin Homes. There are some 300 plus private sector properties that will benefit from a mixture of measures made up from external wall insulation, gas condensing boilers, voltage optimisers and positive input ventilation. The estimated value of the works is in the region of £2.5 million and is funded by the Welsh Government.

A further bid was been submitted for upgrading the energy efficiency of the private dwellings at

Hollybush. This bid has provisionally been accepted and is being taken forward for surveying.

The Community Energy Saving Programme (CESP)

CESP is a central government initiative that requires gas and electricity suppliers to deliver energy saving measures to domestic customers in low-income areas. CESP has been designed to promote a 'whole house' approach to improve the energy efficiency of homes.

There are several CESP projects that have been undertaken within the County Borough over the last year. A synopsis of each scheme is as follows:-

British Gas CESP Scheme

The council entered into an agreement with British Gas to improve the energy efficiency of 58 council properties in Markham and 79 in Panside . The approximate value of the works is £1 million. (CCBC £600,000 & British Gas £400,000)

SSE (Swalec) CESP Scheme

An agreement was entered into with SSE (Swalec) to improve the council properties within the following lower super output areas. The measures carried out and or programmed are:-

- **Porset/Lansbury Park**
126 properties (wimpy no-fines) received external wall insulation; there were 1 condensing boiler/heating renewal and 45 loft insulation upgrades.
- **Rhymney**
168 properties received external wall insulation (Tanybryn/Maerdy View), there were also 95 condensing boiler/heating renewals and 6 loft insulation upgrades.
- **Gilfach**
155 properties (wimpy no-fines) received external wall insulation, there were also 6 condensing boiler/heating renewals and 120 loft insulation upgrades.
- **Fochriw**
96 properties (wimpy no-fines) received external wall insulation; there were also 45 condensing boiler/heating renewals and 70 loft insulation upgrades.
- **Cefn Hengoed**
42 properties programmed to receive boiler/heating renewals and 70 loft insulation upgrades.

The estimated total value of the work is £4.4 million. (SSE £3.6million & CCBC £800K).

Private Housing CESP projects

In addition to the above schemes there have been a number of private housing CESP projects carried out. These projects are at:-

- **Brithdir & Trethomas**

SERS a local specialist external wall insulation company are undertaking a CESP project to private householders within Brithdir and Trethomas. Approximately 350 properties have received external wall insulation as part of this project.

- **Cefn Hengoed**

EDF energy targeted the private homes within the Cefn Hengoed area. It is understood that at least 100 private sector properties received external wall insulation which included some 38 condensing boiler renewals.

- **Bryn Carno Rhymney**

29 Private properties at Bryn Carno are receiving external wall insulation at Bryn Carno. These works are being managed by UWHA and being funded by the Welsh Government and an Energy company.

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 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. The Welsh Government has confirmed that Hollybush has been given, in principle, approval for a scheme under Arbed II.

Education for Sustainable Development



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 ESDGC Practitioner network, education e-bulletins and school updates. 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:

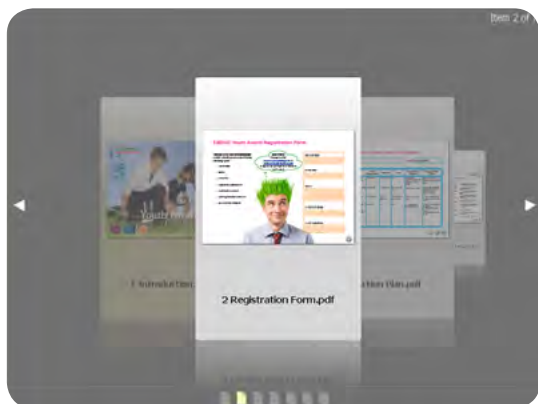
- A youth ESDGC Toolkit to support youth workers incorporating ESDGC into the youth work programme.
- ESDGC has been incorporated into all aspects of the youth service through their comprehensive ESDGC Action Plan.
- ESDGC web pages developed on the sustainable Caerphilly website for the youth sector.
- ESDGC training provided for youth workers on the ESDGC Youth Award Scheme as part of the Youth Service Training Week.
- Supporting youth groups working on the ESDGC Youth Award Scheme.
- Supported the Youth Service Staff Conference

- to promote the ESDGC youth award scheme and raise awareness of sustainable activities available for youth clubs to participate in.
- Developed ESDGC Youth Award Scheme.



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 ESDGC Youth Award Scheme was launched in February 2012 at Penallta House to promote the scheme to youth clubs and other organisations.

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.

Education for Sustainable Development & Global Citizenship work with Teachers

Eco School 'The Bigger Picture' Training

Eco School 'The Bigger Picture' training was held for primary and secondary school teachers in October 2012 and March 2013 to support schools working on the eco schools programme. The training was promoted to schools in the Caerphilly County Borough, with 52 teachers from attending over the two sessions.



The training was designed to support new and existing eco school coordinators working through the eco schools process, looking at developing ESDGC curriculum maps, monitoring and evaluating eco work and incorporating eco work into the curriculum to achieve a whole school approach to ESDGC.

ESDGC 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 schools and early years settings benefiting from the resources.

ESDGC Education for Sustainable Development & Global Citizenship work with Governors

ESDGC Governor Toolkit



An ESDGC Toolkit for school governors has been developed as a partnership project with Bridgend County Borough Council.

The toolkit has been 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 guidance on the Estyn inspection framework and the evidence required for ESDGC.

The toolkit was launched in the autumn term via governor networks and through the Governors Wales network and will be promoted as an agenda item at a future Governor ADEW meeting. It has also been circulated to other ESD officers throughout Wales via the All Wales ESDGC Officers group.

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.

Eco Early Years Conference

An Eco Early Years conference was held in March 2013 in partnership with the Early Years Team to support early years settings incorporating ESDGC into their curriculum and management. The aim of the conference was to show the attendees how settings could be managed sustainably, to provide ideas to incorporate ESDGC into curriculum activities with the children and to promote the sustainability message to the parents and wider community.

Approximately 80 early years workers and managers attended the conference from settings throughout the Caerphilly County Borough to learn more about sustainable development and global citizenship. The conference included a key note speech from Phil Williams at Plan-it Eco and workshops covering waste minimisation, energy efficiency, willow weaving, the world of Ogs and sustainable lifestyles and global citizenship.

The conference was held at St James Primary School, enabling attendees to discover the sustainable features of a new build school.

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 is being rolled out to settings as part of phase 3 in 2013.

Eco Schools Programme



Eco Schools

We achieved 100% participation in March 2009 with 91 schools in the Caerphilly County Borough working towards the Eco Schools Programme. During 2012/13 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 31st March 2013, all 91 schools had achieved an Eco School award. Out of the 91 schools with an award, these are broken down into 13 Bronze awards, 22 silver awards and 56 Green Flag awards (including 25 second green flag awards and 13 third green flag awards). To date an amazing 62% of our schools hold the Eco School green flag award.

Four schools in the County Borough have also achieved the prestigious Eco School Platinum award. These are St Gwladys Bargoed School, Llanfabon Infants School, Ysgol Gynradd Gymraeg Caerffilli and Cwrt Rawlin Primary School. This is a huge achievement with only 73 schools in Wales achieving the award.

Eco School Support

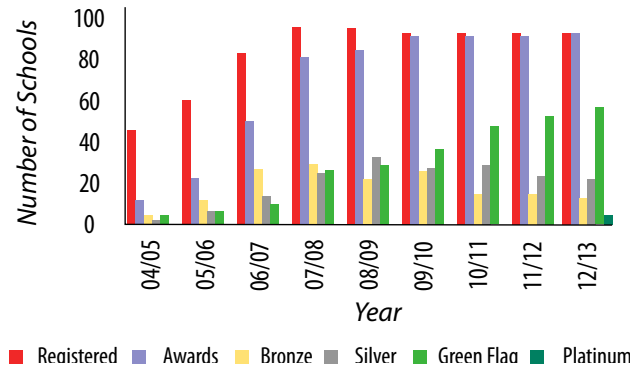
Considerable support has been provided to primary and secondary schools in the County Borough working towards the Eco School programme over the past year, including

- 71 individual school visits made to support

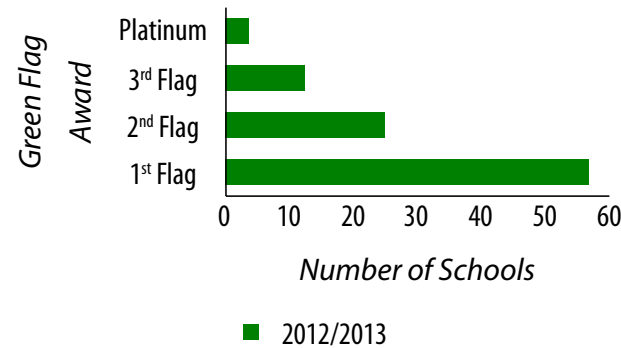
schools working through the Eco School programme.

- 8 Eco School Green Flag assessments undertaken for neighbouring authorities.
- 15 Eco School Pre Green Flag assessments undertaken for schools in the Caerphilly County Borough
- Supported 7 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 'The Bigger Picture' training was run over two sessions supporting 52 teachers working on the eco schools programme. The training covered curriculum mapping, monitoring and a whole school approach to ESGC for new and existing coordinators.
- Promoted 'Green Grin O meter' to schools, The Green Grin O meter is a sustainable index designed 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.

Number of Eco Schools



Eco School Green Flag Awards



Fairtrade

Caerphilly Fairtrade Group

During 2012 the Caerphilly Fairtrade group continued to promote their Fairtrade town status, which was renewed in 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. Fifty schools have signed up for the Fairtrade Schools Scheme to date.

Fairtrade School Training

26 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 four twilight sessions giving teachers the opportunity to work through the scheme whilst attending the training. To date six schools in the Caerphilly County Borough have achieved Fairtrade School status, with 20 schools working towards becoming a Fairtrade School.



Fairtrade School Workshops

Nine Fairtrade school workshops were held during 2012/13 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-six 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

Pride in Your Place Awards

The SD & LE Team once again supported the Pride in Your Place Awards, an initiative that acknowledges the endeavour, innovation and commitment of those who have helped to make our area cleaner, safer and greener and a better place to live and work. The award scheme is open to all residents, schools, businesses and community groups within the County Borough.

The SD Team supported the development of the 2012 awards event, following on from the successful 2011 event and managed the Environmental Education category. This included promoting the award scheme to schools and youth groups, developing judging criteria, judging applications and supporting the awards evening. There was a significant increase in the number of high quality

applications per category for the 2012 awards following the success of the 2011 event.

Green Grins Index – School Sustainability Index

As part of the process of raising awareness and understanding of ESGC 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.



Both the English and Welsh version of the Green Grin O meter are being promoted to primary schools in the County Borough.

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.

Visit <http://www.greengrin.co.uk> or <http://www.cymraeg.greengrin.co.uk> to view the Green Grin O meter and find out how sustainable you are.

Global Games Resource

A global games resource pack is being developed in partnership with Eco Schools Wales with support from the Healthy Schools Team. The resource will include approximately 20 detailed games (including instructions on how to play each game) from various countries plus other relevant information on the country including cultural and environmental information.

The aim is that children can use the resource to play the games during playtime and after school while the teachers can use the games as part of the curriculum, linking to the other information provided as a starting point for specific projects.

The resource will be suitable for primary schools and the lower year groups of secondary schools. The games have been trialled by the children's youth forum to ensure they are suitable and interesting for the target age group.

Eco School Promotional Film

Filming has been undertaken at five schools to create an Eco School YouTube film to promote the eco school achievements in the Caerphilly County

Borough. Schools were chosen to ensure all eight eco school topics were promoted plus the seven elements of the eco school process. The storyboard was prepared to ensure each school knew what they had to cover as part of their filming session.

The film should be available for viewing from June 2013 and will be promoted via the councils website and the sustainable schools website.



Sustrans Lesson Plans

Working with Sustrans to help them develop 1 hour lesson plans for schools in Wales, incorporating sustainable transport into geography, history, science, English, PE and DT. The lesson plans are currently being trialled by a selection of schools in the Caerphilly County Borough to provide feedback on the content and identify key curriculum links. Following the trial Sustrans will finalise the lesson plans and make them freely available for schools in Wales.

Healthy Colleges Scheme

Supporting Ystrad Mynach College with their Healthy Colleges Scheme. They are currently working on the 'environment' section of the scheme, which involves promoting sustainable development to staff and students and implementing projects to improve the college grounds and facilities.

Children & Young People's Partnership

Supporting the Children and Young People's Partnership to develop the Local Participation Action Plan.

A review of the Participation Strategy for Children and Young People in 2012 identified areas to be developed over the following years as well as recognising Participation as the underpinning priority for the Children and Young People's Plan 2011/14.

Following this review a focus group was established consisting of officers that work with or on behalf of children and young people to work together to develop the Local Participation Action Plan, as required by Welsh Government, ensuring that all relevant areas are included.

Caerphilly Solar Schools Project – Phase 2

In partnership with United Welsh Housing Association an additional £71,000 has been secured

to continue to install solar photovoltaic panels on the remaining schools in the Heads of the Valley area.

The cost of PV systems has fallen dramatically from a high of £25,000 to between £6-8000. This means that, subject to the completion of structural and asbestos surveys, 8 of the remaining 10 schools in the Heads of the Valley area should hopefully be able to have the systems installed.

The remaining schools in the Heads of the Valley area are:

- Park Primary School
- Deri Primary School
- St Gwladys Bargoed
- YG Gilfach Bargoed
- Ysgol Y Lawnt
- Gilfach Fargod Primary School
- Aberbargoed Primary School
- Phillipstown Primary School
- Abertyswg Primary School
- Upper Rhymney 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 is fitted to all 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, which was developed in 2011 as part of the Caerphilly Solar Schools Phase 1 project, is being promoted to schools to support their eco school activities and to help them incorporate renewable energy and energy efficiency into the curriculum. The resource pack has been distributed to every school in the County Borough, with solar kits available for schools to borrow.

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.

Cycle Training

Funding has been secured from Sewta to provide cycle training for schools. This will include National Standards training for year 6 pupils, Cycle Instructor training for teachers and local authority officers,

to enable them to run the training in-house, bike maintenance training for staff and pupils and National Standards training for staff at Ystrad Mynach College to support staff cycling to and from work.

£3,750 was secured in total to help encourage sustainable travel within the authority. The training will take place during the summer term

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 2012/13 include governor training, global citizenship links for primary and secondary schools and investigating grant funding for ESDGC projects.

ESDGC 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 continued to support Young Enterprise. 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 2012/13. The environment award was won by 13 pupils from Lewis Girls Comprehensive School who developed a range of eco-friendly christmas decorations and wedding favours made from recycled materials.

The Living Environment



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.

A key focus of the work of the SD & LE Team in 2012/13 has been to ensure the integration of sustainable development and living environment issues into the developing Single Integrated Plan for the County Borough. Input has been provided into all stages of development including into the Unified Needs Assessment, involvement in workshops and the 'writing group' for the Single Integrated Plan.

The draft Single Integrated Plan, produced at the end of March 2013 and incorporating comments from the public consultation, includes a "Greener Caerphilly" section based on the priority environmental issues identified and consulted on by the Living Environment Partnership. The box (above right) contains the summary of the aims and priority areas identified in the "Greener Caerphilly" section. Further work has been undertaken to ensure that SD and environmental issues are incorporated into the 4 other themes of the Single Integrated Plan.

Greener Caerphilly

A Greener Caerphilly aims to:

- Safeguard and, where necessary, enhance the living environment in the Caerphilly County Borough for its own sake
- Secure quality of life for local people and visitors now and in the future.

Based on the findings from the Caerphilly Unified Needs Assessment, the Single Integrated Plan development days, and the work of the Living Environment Partnership, three priority areas for working towards a Greener Caerphilly have been identified; these are:

- G1: Improve local environmental quality
- G2: Reduce the causes and adapting to the effects of climate change
- G3: Maximise the use of the environment for health benefits

A full copy of the document can be found at:

<http://your.caerphilly.gov.uk/communityplanning>

Local Environmental Quality

The SD & LE Team manages the Community Assets funded, Local Environmental Quality small grants fund. This fund is aimed at maximising the benefits of joint environmental projects in the County Borough. The fund supported 3 projects in 2012/13.

1. Fairview Community Gardens

Charter Housing has operated a Community House on the Fairview Estate, Blackwood for a number of years. The Fairview estate consists of 180 properties – mainly houses but with some one-bedroom flats. The Community House is a resource for use by the whole community – and has been used for community events as well as a base for the Tenants Association, Parent & Toddler Group, credit union collection point, midwife as well as weekly drop ins/ coffee mornings/youth activity and IT drop ins.

Prior to the works, the rear garden was just grassed with uneven old paving, which made it unsuitable for the full range of community activities – particularly for toddlers, older people and the disabled. The project aim was to undertake improvement works to the rear garden at the Fairview Community House in order that it could be used more extensively and safely for the benefit of the community.

A series of open consultation events were held during August 2012 and a detailed consultation with members of the Parent & Toddler Group to come up with a project brief/ plan. 10 local residents expressed an interest in taking part in the project. 5 of them were recruited and received training and were involved in the project.

The works involved repaving, the creation of new raised planted borders, as well as soft play areas and a covered sandpit for children. Benches and seating were also provided to encourage people to enjoy the new garden!

2. Forest and outdoor education facility, Nelson Village Partnership & Friends of the Wern Park

This project created a large new native woodland area that will serve as a purpose-built outdoor education facility and will compliment and enhance the environmental quality at Wern Park, Nelson, which currently suffers from drinking, antisocial behaviour, and littering. The facility included the

creation of a major natural/wildlife corridor between grassland and existing woodland, enhancing the biodiversity credentials of the area. The area was designed to be utilised as a forest school for the local community and surrounding areas and will provide extensive outdoor education opportunities for the local schools and community. Within the open green spaces, a bird hide and feeding stations were built to provide an opportunity for further education and leisure.

As part of the project local people have been trained to deliver outdoor learning including Forest School and outdoor education activities, events and land-based skills to members of the community using the new site.

3. Healthy Rivers

The Healthy Rivers project is a partnership project between Groundwork Caerphilly, South East Wales Rivers Trust (SEWRT), Environment Agency Wales (EAW) and CCBC with the aim of removing the barriers to salmon migration up the River Sirhowy, and to engage local people with the project.

A project steering group was established to oversee the work and a Project Officer appointed to co-ordinate and take forward the work. The Programme Officer's role includes research into land ownership, sourcing permissions to work on the land, seeking advice on the correct method of river easing, ensuring work is completed (using

contractors where necessary) and community engagement.

Walkover surveys have been undertaken for the whole length of the river. The surveys have identified issues that are impacting on fish populations and other aspects of the ecology on the Sirhowy River. The results of these surveys confirm the presence of barriers to migration, a key constraint on the Sirhowy reaching its full ecological status. Removal or modification of these barriers to improve fish passage will open up large sections of the upper catchment to migratory species.



As part of project to restock the river with salmon, SEWRT supplied a fish tank, pump and cooling equipment along with some salmon eggs in mid February. The equipment and eggs have been kept in the Groundwork classroom. The majority of the eggs successfully hatched and the young fish developed from Alevin to Fry. The young fish will be

kept in the tank until July when the school children will be involved in releasing them back into the river Sirhowy. Pupils from Ynysddu Primary School and Pentwynmawr Primary School have been to the classroom to see the eggs and learn about the lifecycle of the salmon. More local schools are due visit the classroom to see the salmon and learn about the work Healthy Rivers aims to achieve along the River Sirhowy.

Allotments

The development and use of allotments remain an important issue for the Sustainable Development Advisory Panel. The SD & LE Team continues to work towards achieving the aims of the Allotments Strategy. An element of the Community Assets budget is allocated each year to support this work. The main focus is to bring disused and redundant plots back into use, and to create new plots in areas of over demand. There are 90 allotment sites within the County Borough supported by the Authority, with 2,087 individual plots. Of those plots 13 are currently vacant and 94 are classed as unusable. There are currently 357 people on the waiting lists for plots to become available.

In 2012/13 the funding was used to support work at Stanley Row, Llanbradach, Abertysswg and Gilfach.:

- At **Stanley Row** an area of overgrown land was cleared to create additional plots.
- At **Abertysswg** clearance of overgrowth and the removal of debris/rubbish was

complimented by lifting the crowns and cutting back conifer trees that were overhanging the plots to provide light.

- At **Gilfach** allotments extensive ground clearance and the removal of debris was undertaken. Material removed during ground clearance has been stored on site as compost to rot down to be reused at a later date.



Events Programme 2012/13

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. Members of the Group put on a partnership marquee for the 2012 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.

Bedwellty Agricultural Show. The Bedwellty Show was a smaller scale event than the Big Cheese, having 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.



The Come Outside! Greater Bargoed Pilot

Project. The SD & LE Team co-ordinates the “Come Outside! Greater Bargoed Project”, which is one of the Authority’s Outcome Agreements (Outcome Agreement 8, Enhancing the quality and enjoyment of the natural environment). This is one of 10 Outcome Agreements that the Authority has with the Welsh Government. Successful delivery of the 10 Agreements ensures that the Authority receives £1.869m for 2012/13 and a total of £5.6m over 3 years on achievement of these performance targets.

The Come Outside! Team completed the third 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 Bargoed. During 2012-13, 158 community members volunteered for environmental improvements, 1,511 children attended environmental activities and 28 wildlife habitats were enhanced or created.

A key element of the project has been to develop community engagement and to ensure the designation of Aberbargoed Grasslands as a

National Nature Reserve (NNR). On Thursday 14th June 2012, John Griffiths, the Minister for the Environment and Sustainable Development at the Welsh Government formally announced the official designation of Aberbargoed Grasslands as a National Nature Reserve (NNR). It became the first National Nature Reserve to be declared in Caerphilly County Borough, and the first in the eastern valleys.

Aberbargoed Grasslands is rich in biodiversity and is home to the endangered marsh fritillary butterfly, as well as other valuable wildlife features, including fungi, rich grasslands, ponds and hedgerows.

A special celebration of the Grasslands to launch the National Nature Reserve was held during Wales Biodiversity Week, with a butterfly parade involving pupils from Aberbargoed and Markham Primary School, Ysgol Bro Sannan and Heolddu Comprehensive School. The pupils were dressed as insects made in the weeks leading up to the launch and the parade was accompanied by a samba band of local school children. John Griffiths, the Minister for the Environment and Sustainable Development at the Welsh Government came to ‘launch’ the National Nature Reserve on the day, which was followed by an evening celebration for the local community on the sports field with a variety of activities, stalls and displays, promoting local wildlife and community groups who have had involvement with the National Nature Reserve.

Climate Change

Climate Change Adaptation. Climate change adaptation is a major area of work for both the SD & LE Team and the Living Environment Partnership. Significant resources were drawn into this priority issue during 2012/13.

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 who 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.

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.

Developing Climate Change Adaptation Plans for CCBC Services. Caerphilly's Climate Change Strategy published in 2009 recognised the need for organisations operating in the County Borough to collaboratively produce a Climate Adaptation Plan for the borough.

In collaboration with Dr. Alan Netherwood of Netherwood Sustainable Futures, two workshops have been run on Climate Change Adaptation. These workshops were designed to introduce climate adaptation to a range of key personnel from across the Authority and to develop an approach to the issues. As a result of this work it was agreed that a further series of workshops should be developed to engage with and inform officers and Services across the whole Authority.

The workshops focus on building understanding and awareness of climate change across the breadth of our Service areas and to promote the need for managers to consider adaptation to the likely impacts of climate change on those services in our borough. The workshops were supported by a small facilitation team consisting of officers from the Sustainable Development & Living Environment Team, Performance Management and Emergency Planning.

The aim is to create a bespoke approach for each Service area, to which managers and operational officers can relate their work. This will allow each Service area to identify the likely climate impacts on their Service and to develop a prioritised action plan for addressing the key impacts.

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

Climate Change Commitment. At events throughout the County Borough, local residents are encouraged to sign a climate change commitment to change their behaviour to reduce their contribution to climate change. Actions include planting a tree, using bags for life or changing to energy efficient light bulbs. In 2012/13, 1,580 local people made a climate change pledge. This brings the total number of residents that have signed a commitment to combat climate change to 5,635.

Climate Change Woodlands. The Climate Change Woodlands concept was developed as a public engagement tool. It links with the Climate Change Commitment 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 2012-13, three Climate Change Woodlands were planted:

- **Ty Sign** . A planting event took place on Wednesday 20th February 2013 at Ty Sign Nature Trail. The event was well supported with committee members of the Ty Sign Community Partnership, pupils and staff from Risca Community Comprehensive School, Groundwork Caerphilly staff and members of the Mid Valleys East Community 1st Cluster Team. 31 trees and 50 whips were planted on the day a mixture of Beech, Field Maple and Bird Cherry.
- **Richard Lewis Woodlands, Oakdale.** The second event took place in the Richard Lewis Woodlands at Oakdale on Wednesday 27th February 2013. This event was supported by the Oakdale & Penmaen Community Partnership along with pupils and staff from Oakdale Comprehensive School, Groundwork Caerphilly staff, CCBC Staff, Asda Blackwood staff and members of the Mid Valleys East Community 1st Team.
- **McLaren Climate Change Woodland, Abertysswg.** On the 12th March local residents and children took part in climate change activities at the Abertysswg community centre and undertook planting to establish the McLaren Climate Change Woodland site. In total 800 native trees were planted.

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 2012/13 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. 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. Since this review the enterprise has reported a trading surplus for the first time.

The refurbishment of the Trusts office, Ty Mynyddiswyn Environment Centre, was celebrated with a formal launch on Friday 29th June 2012.

State of the Environment in Caerphilly County Borough.

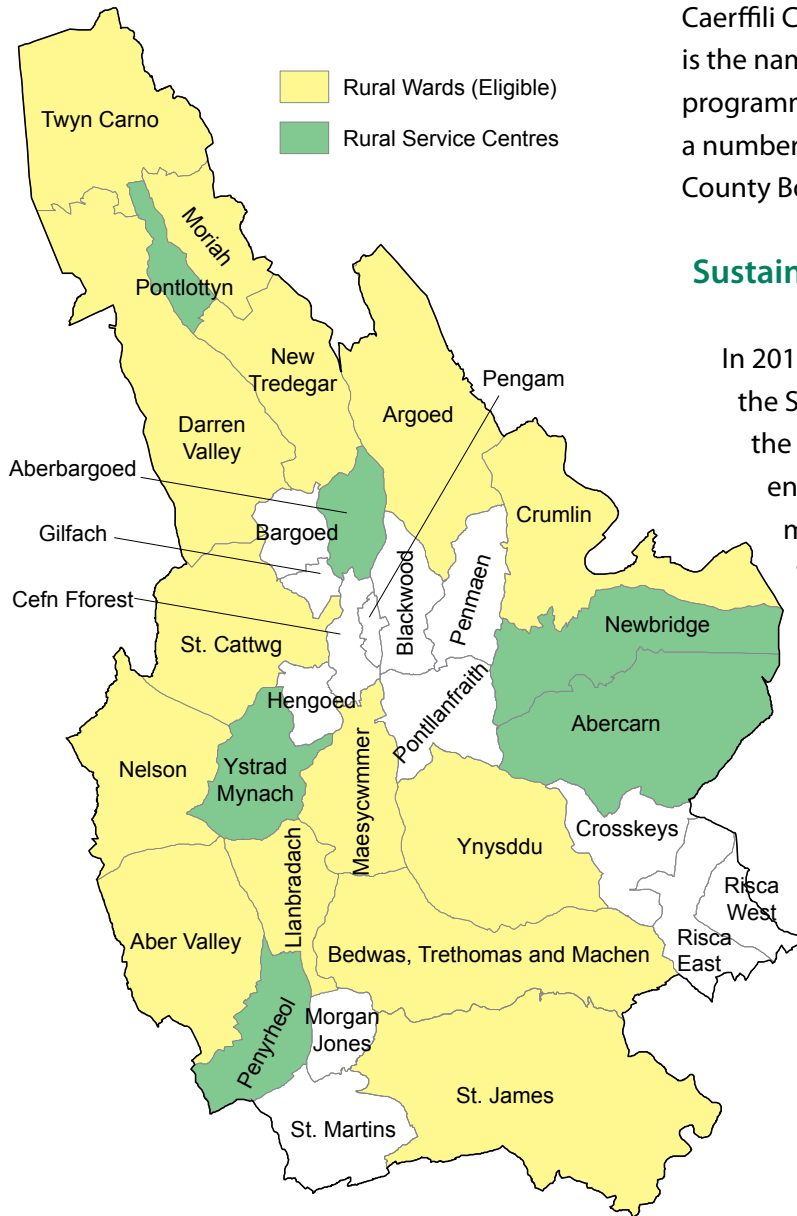
Research and data collection was undertaken and a State of the Environment in Caerphilly report was published in July '12. The report is based on 10 key environmental indicators including street cleanliness, waste management, fly tipping and water quality.

A full copy of the document will shortly be available or can be found on the Council's Sustainable Development website, <http://your.caerphilly.gov.uk/sustainable/content/welcome>

Rural Development Plan



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 Sustainable Energy Officers joined the SD & LE Team. They are funded through the RDP programme to deliver the sustainable energy element of the programme. The main aim of their project is to engage with farm households and rural businesses to reduce energy use, promote the uptake of renewable energy, and help them to adapt to climate change.

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.

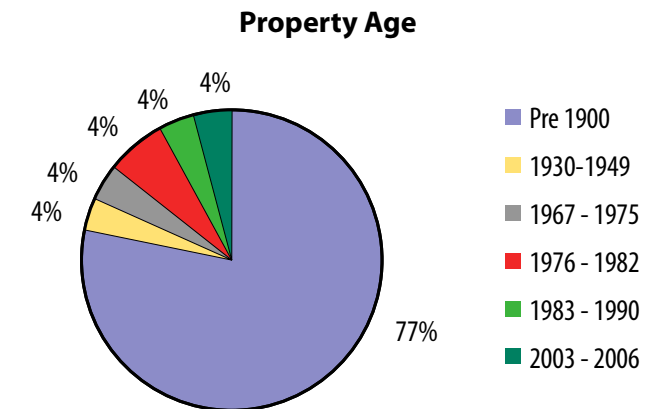
Assistance through the Rural Development Programme is provided in eligible 'Rural Wards' or 'Rural Service Centre Wards':

Consultation

During the development of the project, detailed research was undertaken to identify the key issues for the County Borough. A database of 320 farms in eligible wards was identified, and a consultation exercise was carried out. The results showed that the majority of farmers reside in pre-1900 hard-to-treat properties that are off the mains gas network.

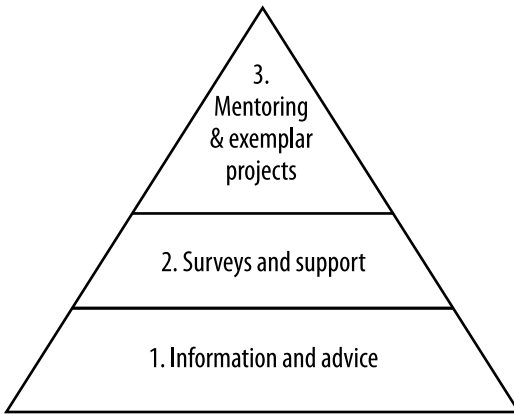
It also showed that 58% of farmers believed that they spent more than 10% of their income on fuel bills, which places them in the fuel poverty category, and that 68% of farmers were unaware that they could be eligible for financial assistance to make their home more energy efficient.

Only 4% of farm households were on mains gas.



Help available to eligible farms & businesses

The RDP Sustainable Energy Team provides a 3-tiered system of support for farms and 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

Although a number of national organisations produce factsheets on energy efficiency and renewable energy technologies, the RDP Sustainable Energy Officers wanted to aim it at a

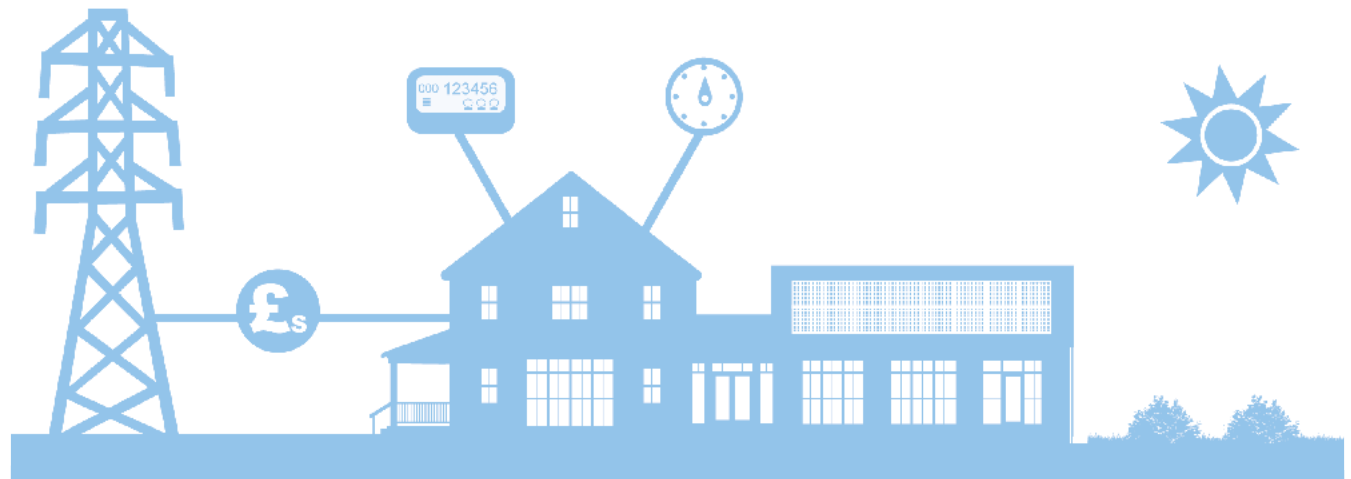
local, Caerphilly level. The factsheets particularly promote renewable energy technologies to businesses in rural areas of the County Borough, as by installing renewable energy technologies they could add value to their business by countering any rising energy costs, reducing the need for security of supply, and generating an economic benefit – but also contributing to the issue of climate change.

The RDP Sustainable Energy Officers have compiled 11 factsheets on a variety of subjects: biomass, energy efficiency, feed-in tariffs, forestry and woodland, heat pumps, micro-hydro, planning, renewable heat incentive, solar photovoltaic and thermal, wind.

The factsheets contain a wide range of advice and are distributed to those attending events, or to those who have an initial query to the team.

Through consultation and talking to businesses and farm owners, there is an obvious lack in understanding of renewable technology in the County Borough. Many are aware of energy efficiency but few implement all the measures that they could.

The RDP factsheets provide them with a basic understanding and include contact details of the Sustainable Energy officers if further help is needed.



Level 2. Surveys and support

Energy Surveys

As part of the process of promoting energy efficiency and renewable energy to farms and businesses, the RDP Sustainable Energy Team are able to offer free energy surveys to those whose bills are under £30,000 per year. The aim of these free energy surveys is to offer impartial and independent advice to businesses recommending how to make their business more energy efficient and provide information on viable renewable energy technologies. Following the report, officers are then on hand for further assistance.

Micro-enterprises who receive an RDP Budding Business grant are also offered the option of having a free energy survey, as are businesses that have attended presentations or have come into contact with the officers.



Once they decide to take up this option, the client is asked to gather one year's worth of energy bills prior to a site visit where a questionnaire is completed. The RDP Officer and client then survey and photograph the premises looking at appliances, controls and metering, behavioural measures current energy efficiency, consumption, insulation of walls, roof, floor, pipes and cylinder and lighting and glazing. Following the site visit, the RDP Officer compiles a report providing advice and recommendations to improve the energy efficiency of the site. Suitable renewable energy technologies such as biomass, heat pumps, solar thermal and photovoltaic, wind turbines, micro hydro, Renewable Heat Incentive and Feed-in Tariffs are discussed. The report also provides approximate costs and paybacks and signposts relevant grant information, possibly taking recommendations to fruition.

During 2012/13 a total of nine energy surveys were completed and presented to businesses.

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.

Business Renewable Energy Workshop

A 2.5-hour workshop was provided to businesses within Caerphilly borough by the RDP Sustainable Energy Team with the overall aim to encourage uptake of renewable energy technologies, which will in turn:

- Reduce energy use and reliance on fossil fuels
- Reduce fuel bills
- Reduce carbon dioxide emissions

The workshop was conducted in an interactive style with quizzes, group discussions and information on how to first reduce a business' energy consumption by becoming more energy efficient including explanations of the financial incentives available and how each technology works, coupled with identifying the factors affecting the choice of technology

The beneficiaries included Blaengawney Cider in Hafodyrynys, Richard Bruten Free Range Meats in Crumlin and Argoed's violinmaker, John Watkins.

Links to other support

A key element of the work is 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). During 2011/12 the RDP Sustainable Energy team promoted the Nest scheme through a mailshot and also completed 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.

From the applicants sent to Nest three residents have had energy efficiency measures installed.

Resident 1 Electric Storage Heaters were installed. The client was unable to have oil as there was no access for deliveries and there is no gas in the area.

Starting SAP: 1 Final SAP: 20

Resident 2 LPG system installed.

Starting SAP: 1 Final SAP: 45

Resident 3 New radiators were installed at the property as the clients existing radiators were 45 years old and not working.

Starting SAP: 37 No SAP increase

Caerphilly Agri Network

The RDP Sustainable Energy team are involved with

the Agri Network that has been set up by the RDP team. The key aim of the Agri network is to generate added value engaging with local agricultural people to identify issues and opportunities to be taken forward including projects to reduce costs, increase revenues, improve understanding on key issues, support diversification, improve efficiency, resource and energy use.

The beneficiaries will be the farm household members, agricultural micro enterprises and any other groups participating in resulting network projects. It also benefits the programme and promotes CCBC in a positive light within the local farming industry.

A total of 18 members of the local agriculture industry attended the first meeting held in October 2012, at Penallta Rugby Club. Discussion focussed on common issues to everyone, investigating the feasibility of projects and taking ideas forward and delivering them collectively.

The first meeting resulted in productive, positive discussions on a range of issues and awareness of the meeting is growing. Issues for investigation included joint purchasing of fuel and supplies, direct selling, use of biofuels and diversification. Awareness of the available RDP farm energy advice and the timber project was also raised.

Level 3. Mentoring and exemplar projects

The 3rd 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.

Project 1: Maes yr Onn - Off Grid Living

Maes Yr Onn Farm is well respected in the local agricultural community. Over the last five years, the farm has been successful with showing and achieving top sale price for its stock. Specific achievements include being the overall winner of the South Wales Mountain Championship for all seven of the major agricultural shows during 2012 (including the Royal Welsh/Vainer Show/Bedwely Show/Vale of Glamorgan Show/Llangydinor Show/Usk Show/Monmouth Show).

Arthur & Sue Davies' daughter, Bronwen Davies was the Climate Change Champion for Wales during 2012 and was recently an Olympic torchbearer in Caerphilly

<http://www.caerphilly.gov.uk/application.aspx?s=Be1HHt9Zwb/koyvQv4yrgMAFfbZE6+jZ/RTwbwp8ia0wgmYZtZdf+UnWHh7H9I7BsvvvyqjMP/M=>

The family gained planning permission to construct a farmhouse on the former site at Maes Yr Onn Farm,

Manmoel in May 2011. The former farmhouse, built prior to 1825 burnt down in 1976. The construction of a detached two-storey dwelling will ensure effective day-to-day management of the farm and stock and will enable further expansion of the business. The site lacks mains connection of electricity, gas, water or sewerage 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 and resource use.

The main aim of the project was to provide a renewable energy generation and water resource solution in an off grid setting. This involves some major challenges including balancing the various technologies and ensuring compliance with all appropriate regulations including Planning, Building Regulations and the Code for Sustainable Homes Level 3.

Caerphilly County Borough Councils RDP Sustainable Energy team, BRE and SSE have been working in Partnership with the Davies family to provide a solution that balances resource efficiency with renewable technologies. All building design work has been undertaken by Andrew Sutton, Associate Director BRE South West & President, Royal Society of Architects in Wales. The design of the farmhouse is based on the traditional Welsh Longhouse, but updated to provide a comfortable family home.



North Elevation



East Elevation

The Solution:

The starting point was to analyse the energy and water usage patterns of the family in their existing terraced property and to establish their likely consumption (demand) in the new building, based on energy modelling data. The key deliverables included system design of three key utilities including;

Heating

The main heat source for the farmhouse will be biomass, using wood managed sustainably on the farm. The biomass boiler will be complimented by a thermal store. Heat within the building will be distributed using the "thermaskirt" system, a new innovative product that has recently come to market

which distributes heat through the skirting board rather than through radiators.



Electricity

The main electricity generation will be from a photovoltaic panel array linked to a battery system with a small diesel generator as backup. The system has been designed to allow for the addition of a wind turbine, in the future, to further decrease reliance of the diesel backup generator. Predicted reduction in diesel consumption per month has also been modelled.

Water

The water demand for the family will be met by a rainwater harvesting system and has been modelled and designed for the site specific to the family's demand, and includes filtration and UV treatment.

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.

Engagement/Links:

Key to the success of the project is a communications plan that provides a strategic framework for the Partnership to deliver effective promotion and engagement with all key stakeholders and interested parties.

A dedicated flickr gallery is just one of the communication methods the Partnership are using

<http://www.flickr.com/photos/caerphillycbc/sets/72157632823808866>

To date the Partnership have produced updates in the Council's residents newsletter (Newsliner), undertaken a site tour with colleagues from Conwy RDP, produced case study material for use at various promotional events, created website updates through all partner websites and prepared 3 press releases. There have been numerous articles regarding the project written in a number of media outlets including the Western Mail, Campaign, South Wales Echo and South Wales Argus.

Overall the project exemplifies the Authority's sustainable development principles through reducing resource consumption using local materials and labour, and protecting the environment. The project also compliments SSE's recently opened renewable heat facility in Treforest that was officially opened by Carwyn Jones on 7th Feb 2013 with a commitment of creating 300 local "green" jobs

The official launch of the project, by Alan Davies AM, Minister for Natural Resources and Food, is scheduled for 6th June 2013, this launch will provide a sound platform for further promotion/engagement of this exemplar project.

Project 2: Behaviour Changes associated with Off Grid Living

The second Exemplar aims to replicate the lessons learnt from the Maes Yr Onn Off Grid Project, to demonstrate sustainable living and to encourage and enable others to reduce resource consumption without reducing their quality of life.

Living off grid means that householders need to be constantly aware of their consumption and ensure against wasteful use of lights and appliances. Limiting the use of electrical appliances and increasing manual work is a difficult balance to achieve, therefore a change in lifestyle is inevitable in order to ensure effective transition from "grid" to "off grid" living. A useful example is the system

designed for Maes Yr Onn Farm, which can be controlled to switch on the diesel generator at times when demand exceeds supply.

Managing the energy demand side is vital for the sustainable performance of any off grid micro generation system. As part of the Maes Yr Onn exemplar project, the family will need to live on approximately 50% of the energy used in their previous, grid connected house. It is hoped that the design solution will mean that this can be achieved with no reduction in the quality of life for the family. The BRE's scope of work also included the preparation of a behavioural change report, which the RDP energy team could replicate, to support other possible off-grid living projects within the County Borough.

The average daily energy consumption of appliances used by the Davies family, coupled with their power ratings, was analysed. The RDP Team reviewed the energy bills of the family's previous grid connected house to establish the average daily consumption of energy in kWh. The information gathered was used in the technical specification to deliver an appropriately sized renewable energy system, which would meet the householder's demand.

The analysis of energy consumption and wattage of appliances highlighted which appliances are more power consuming than others. An occupants guide was created to help lower overall consumption and

reduce householder's reliance on the backup diesel generator. This included energy saving measures for all rooms of the off-grid house, including the kitchen, bedroom, lounge and utility room.

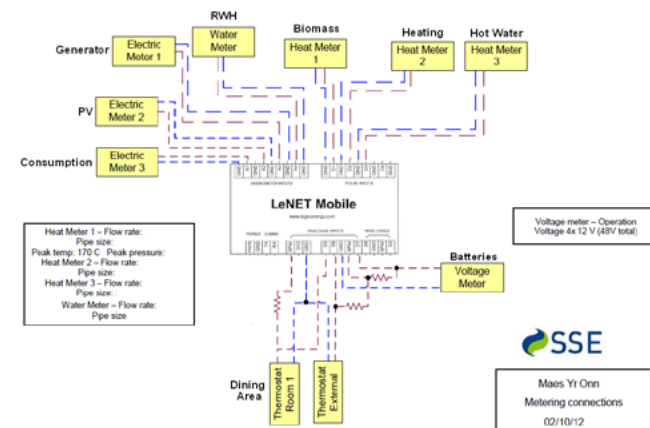
Metering & Monitoring

The entirely off grid site requires innovative solutions that are applicable to the rural location, the resources available and to meet the client's requirements. Integration between the systems is required to ensure that heat, electricity and water are available as required. Photovoltaic arrays are now common but the use of a battery system designed to store electricity generated in the day to be used later requires complex modeling and calculations, based on predicted usage patterns.

The new home will require significant behavior change by the family to live within the generation capacity of the system. Work identified by the partners around behavior change will be delivered and actively monitored post build completion in order to understand the true nature of off grid living and to replicate the lessons learnt for future programmes of work.

By working with SSE, the Partnership will be providing an innovative metering system with remote access via a website interface offering flexible data manipulation and management to reflect future behaviour/lifestyle changes associated with off grid living. The metering schematic for the

project is given below.



Project 3: Hydro Viability Overview in Caerphilly County Borough

This Exemplar aimed to develop micro hydro schemes within the County Borough.

The RDP Energy Team have worked in partnership with Carbon Trust Wales to appoint consultants 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 agreed scope of work was to carry out a high level screening study to determine the potential for low and high head hydropower schemes within the County Borough. The study consisted of two phases;

Phase 1 of the study consisted of a desk based assessment of the County Borough to identify low

and high head hydro potential. Publicly available information including the Environment Agency's opportunity mapping, 'Google earth' and Ordnance Survey map were used to identify watercourses and weirs on the three main rivers in Caerphilly – the Rhymney, Sirhowy & Ebbw.

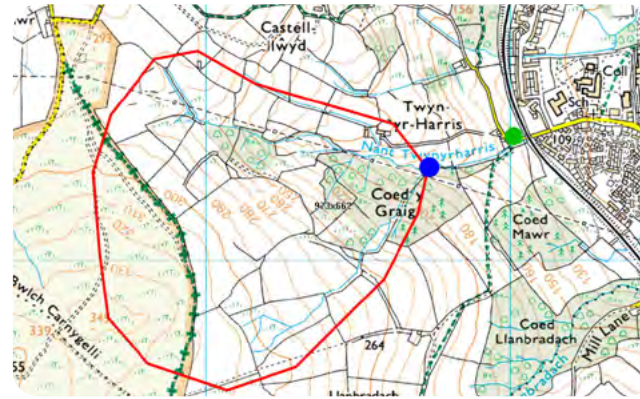
Phase 2 consisted of pre feasibility studies on three sites focussing on a resource assessment including head, flow rate etc and assessment of potential generation capacity. A preliminary system design and specification for appropriate type and scale of technology was produced for each scheme, along with a financial appraisal of the hydro development. Advice on any planning and environmental issues associated with the development was also produced, coupled with an assessment of any existing electrical usage and infrastructure.

Carbon and cost data to construct a business case for the options and assessment of procurement options were assessed along with identification of key barriers and risks to the install and long-term operation and maintenance of the scheme. Recommendations on the most appropriate technical and financial solution were provided along with an action plan with next steps.

Phase 1 of the project initially identified 11 medium to high head sites and 13 low head sites.

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



Following site assessment a large majority were deemed unviable, for example, due to the lack of suitable resource, poor access, lack of grid connection and no suitable place for the construction of an intake or powerhouse. Of the sites assessed only 3 from the original 5 were progressed to the preliminary feasibility phase. These included

Gibbs weir: a low head scheme located to the rear of Pontllanfraith Council Offices

Nant y Twyn: a medium/high head scheme located on agricultural land near Ystrad Mynach

Nant Twynyrharris: a medium head scheme located on agricultural land near Ystrad Mynach

Business cases were prepared for each of these schemes. The Gibbs weir scheme was further

progressed to detailed feasibility but was withdrawn due to the number of risks involved in the development of the scheme. The Nant y Twyn and Nant Twynyrharris schemes were not taken forward by the landowners.

Project 4: RDP Farmhouse Energy Challenge

With a current rise in fuel and energy prices it was decided that energy usage by local farmers living in Caerphilly RDP eligible wards should be studied.

As the UK Government is currently implementing a programme where all the homes and small businesses in Britain will be offered a smart meter and also an in-home energy display, the team decided to target farm households to trial whether in-home energy displays can assist homeowners in reducing their electricity consumption and their electricity bills, and if so by how much.

The RDP officers hold a database of farms and smallholdings in Caerphilly County Borough. These farms were sent a pack, which included a letter, flyer, questionnaire and a pre-paid envelope. Farm householders were given a deadline and encouraged to complete the questionnaire, recording their knowledge and interest in domestic energy issues and their current use of energy.

Those who decided to participate in the challenge received a monitoring diary in which to make a

list of all major electrical appliances in the home, energy rating and approximate age (if known). Then for a two-week period householders recorded daily electricity meter readings and noted appliances used each day with an estimate of time used.

The second week saw a member of the RDP Sustainable Energy team visit all participants to provide an in-house energy display and room-by-room information on how to save energy in the home.

Using the energy monitors supplied, daily readings were recorded in weeks three and four, and a reading taken from their electricity meter at the end of the challenge. The completed diaries were then analysed to see how successful our farm householders had been in reducing their electricity consumption and hopefully saving money!

Project 5: Climate Change Adaptation

Implications for Farms and Rural Businesses in Caerphilly

There are approximately 320 farms in the RDP eligible wards in the County Borough; many of these are primarily hill farms. The majority of the farmhouses were built before 1900, and are considered “hard to treat” being of solid wall construction. Around 96% are off the mains gas grid, and over half of farmers believe that they spend more than 10% of their income on fuel bills.

As a result of a wider Climate Change Adaptation Project being delivered by the CCBC Sustainable Development Team, the RDP Energy Team commissioned Netherwood Sustainable Futures to undertake a study to identify projected future climate changes, the implications for farms and rural businesses in Caerphilly and to identify actions that can be taken to mitigate and adapt to the effects of climate change in the County Borough.

The aim of the study is to identify projected future changes to the climate in the County Borough, the likely impacts of the changes including impacts on our landscape and land use and other potential global changes and their impacts e.g. food security, peak oil. The study also aims to identify the implications for farms and rural businesses and the actions they should undertake to mitigate the causes and adapt to the changes caused by climate change.

The findings of the study will be used to raise awareness with rural communities within the County Borough of the implications of climate change. Findings will also be used to inform the development of advice and programmes of support to farms and rural businesses in the County Borough

The project has four main elements including a desktop study to “frame” climate adaptation in Caerphilly County Borough, engagement to gather the local story of changing climate and current impacts on agricultural approaches. The

RDP Sustainable Energy Team carried out sixteen interviews predominantly with farmers, but also with rural businesses, including a hotel, food company, drink company and allotment society

A workshop was developed to focus on methods of increasing resilience to climate change through farming practices in Caerphilly, all this culminating in a final report, capturing all of these phases with a series of recommendations for change to factor in adaptation and increase resilience. A review of the final report has informed the next phase of work which the Energy Officers will focus on. Key risk areas have been identified and include

- Crop production
- Woodland & forestry
- Livestock
- Soils
- Biodiversity
- Water resources & quality
- Flood risk
- Business resilience

Monitoring and Measuring Progress



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 Regeneration & Planning Division's Service Improvement Plan.
- The Authority's Outcome Agreements – Outcome Agreement 8 – Enhancing the quality and enjoyment of the natural environment

The Team also reports to the Sustainable Development Advisory Panel, and co-ordinates the Council's report to Welsh Government as part of its commitment to the Sustainable Development Charter. The Team also prepare reports to the Local Service Board as part of its role in co-ordinating the Living Environment Theme of the Community Strategy.

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 Actual	2012/13 Target	2012/13 Actual
The number of individuals that have signed the climate change commitment	New PI	New PI	566	3489	1500	1580
The number of staff on the 'Cycle to Work Scheme'	New PI	New PI	104	221	250	291
The percentage of schools with the highest (Green Flag) award under the Eco Schools programme	32%	39.5%	51.6%	58%	60%	62%
The number of education for sustainable development training with schools	New PI	New PI	128	102	100	89
Number of staff on our "Car share database"	New PI	New PI	293	321	350	342
Number of sustainable travel events held	New PI	New PI	10	13	12	11
Number of Climate Change Woodlands created	New PI	New PI	1	3	2	3
Farms and rural businesses advised on sustainable energy issues	New PI	New PI	New PI	28	20	28

Funding

The Sustainable Development & Living Environment Team secured an additional £240,984 to contribute to our work in 2012/13.

This includes:

- £71,000 from UWHA for Solar Schools Phase II
- £25,000 for Caerphilly Environmental Quality projects from the Community Assets budget
- £37,975 from Living Environment Partners to match fund CEQ projects
- £10,525 for Allotment projects from the Community Assets budget
- £5,800 for Climate Change Woodlands projects from the Community Assets budget
- £5,000 from the Health Improvement Team towards the Pedometer Challenge
- £3,750 from Sewta for Cycle Training
- £400 from Fairtrade Wales towards Fairtrade school training
- £12,000 from the Building Research Establishment contribution to RDP exemplars
- £5,000 from the WLGA consultancy for Climate Change Adaptation work
- £20,922 from the Countryside Council for Wales towards Community Strategy delivery
- £4,280 from Heads of the Valleys for renewable energy behaviour change study
- £1,605 from the Building Research Establishment as a contribution to renewable energy behaviour change study

- £37,727 from SSE towards the installation of renewable energy technologies and associated works at Maes yr Onn Farm

£240,984 Total secured

In addition the SD & LE Team:

- Co-ordinates Outcome Agreement 8, Enhancing the quality and enjoyment of the natural environment. This is one of 10 Outcome Agreements that the Authority has with the Welsh Government. Successful delivery of the 10 Agreements ensures that the Authority receives £1.869m for 2012/13 and a total of £5.6m over 3 years on achievement of these performance targets.
- The Team has worked to develop a strategic relationship with SSE (Swalec). This contributed to securing £4.4m worth of CESP funding which was used to install energy efficiency measures in 1,100 properties in the County Borough in 2012/13
- The Team has contributed to a successful application for Arbed funding for Fochriw. This project has recently commenced on site. The estimated value of the works is in the region of £2.5 million and is funded by the Welsh Government. A further application was submitted for upgrading the energy efficiency of the private dwellings at Hollybush. This bid has been provisionally been accepted and is being taken forward for surveying.

Meet the Sustainable Development and Living Environment Team

The Sustainable Development and Living Environment Team is part of the Countryside & Landscape Services section of the Regeneration & Planning Division, based in Ty Pontllanfraith, Pontllanfraith Blackwood. The Sustainable Development and Living Environment Team is currently made up of 4 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 within 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 ESGC work through training the pupils, teachers, headteachers and governors in sustainable development and global citizenship issues.

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.

Post currently vacant: Living Environment Officer