

SUSTAINABLE DEVELOPMENT & LIVING ENVIRONMENT TEAM

Annual Report 2013/14

Introduction

Sustainable development is one of the central principles guiding the work of Caerphilly County Borough Council. The 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 2013/14. The Team works in partnership with the Sustainable Development Advisory Panel (Members Panel), Sustainable Development Core Group (Officers & Members Group), Rural Development Plan Team and the Greener Caerphilly Outcome Group. 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, Core Group, Sustainable Development Advisory Panel (SDAP) or Greener Caerphilly Outcome Group have been involved. It is part of the role of these 4 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 Single Integrated Plan
- 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
- Greener Caerphilly
- Rural Development Programme, Sustainable Energy

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

Executive Summary

The Sustainable Development & Living Environment Team continues to raise awareness of the key sustainable development issues, which affect the Authority, and to implement projects designed to demonstrate the principles of sustainable development and 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 2013/14 the Team has undertaken joint projects and given specific support to 5 Services including Planning, ICT, Procurement and Housing.

The Team co-ordinated the transition of the Living Environment Partnership of the Community Strategy into the Greener Caerphilly Outcome Group of the Caerphilly Single Integrated Plan. The Team continues to co-ordinate the work of the Greener Caerphilly Outcome Group to ensure that we maximise the benefits of working in partnership on environmental issues. In 2013/14 this has included co-ordinating the work funded by the Local Environmental Quality Small Grants Fund.

The Team continues 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 2013/14 include:

- 67% of our schools have achieved a Green Flag (the highest award) under the Eco Schools programme. Fifteen schools have achieved their second Eco School green flag award, with twenty-two schools also achieving their third flag and working towards their platinum award. Eleven schools have achieved the coveted Eco Schools Platinum Award, nine primary schools, one secondary school and one infant school.
- 265 Multi function printers (MFPs) have been deployed across the Authority to consolidate local printers, scanners and fax machines onto single devices these have replaced some 1,300 individual devices. The duplex rate of 58% has saved just over 20 million pages since MFPs were introduced in 2008.
- A Pedometer Challenge was run across the Authority to encourage more active lifestyles. In total over 700 employees took part, with 437 formally submitting data via the website.. Collectively participants walked 3 times around the world during the 8-week challenge.
- 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.
- The Council's Salary Sacrifice Car Scheme. 306 vehicles have been delivered via the scheme. On average each new vehicle has resulted in a 35% reduction in CO₂ emissions compared to the vehicle it replaced.

- Sustainable Energy advice was given to 37 farms and rural businesses in 2013/14
- The Maes yr Onn Farm, off-grid project was formally launched by Alun Davies, the Minister for Natural Resources and Food, on the 6th June 2013. The project won the main award at the prestigious Royal Town Planning Institute Awards for 2013 Maes yr Onn Project Launch
- The SD & LE Team secured a total of £157,770 funding for projects in 2013/14.

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.

Corporate Sustainable Development Annual Report 2013/14

In January 2014, the Sustainable Development Advisory Panel endorsed a recommendation to produce a Corporate Sustainable Development Annual Report each year, starting with a report for 2013/14. The preparation of this report is seen as an important step by the Authority in preparation for the introduction of the “Future Generations Bill” by Welsh Government in the summer of 2014.

The Bill, will require every local authority to formally report on their approach to sustainable development, and on progress they are making to become more sustainable.

The report will be based on the format developed by the Welsh Local Government Association as part of its Sustainable Development Framework programme, which identified a potential model for a set of sustainability measures across economic, environmental and social dimensions. The methodology was influenced by CIPFA’s ‘Sustainability Reporting’ guidance, the Prince’s ‘Accounting for Sustainability Connected Reporting’ and, HM Treasury ‘Public Sector Annual Reports: Sustainability Reporting Guidance for 2011-12’. The aim of the model framework is to connect strategy with material sustainability issues. This work recommends structuring any reporting framework around an organisations priority areas for sustainable development.

CCBC has identified the following 6 priority areas:

- Understanding sustainable development
- Supporting the local economy
- Reducing Carbon emissions and adapting to Climate change
- Sustainable use of natural resources
- Protecting the natural environment
- Improving health

These 6 priority areas will be used to provide the overall structure for the CCBC Sustainable Development Annual Report. A simple set of indicators has been developed based around the 6 priority areas.

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 the previous SD Integration Tool was replaced 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 outcome areas for improving and reporting.
2. The Welsh Government will introduce their “Future Generations Bill” in 2014 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 has 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 Service to complete the Service Improvement Plan, and comments on how it addresses the key sustainability issues relating to that Service.

Regeneration & Planning Division’s Service Improvement Plan (SIP).

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

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

- To lead on the Living Environment Partnership's work on Climate Change, developing a delivery mechanism for the Caerphilly Climate Change Strategy and the roll-out of the Climate Change Commitment.

Sustainable Development Advisory Panel

The Sustainable Development Advisory Panel (SDAP) was set up in February 2002. It consists of 11 elected members across all political parties. In 2013/14 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."

In 2013/14 SDAP met 4 times and received reports on a variety of topics including:

- Climate Change Adaptation
- Fleet Management
- Water Conservation
- Solar Flares and Extreme Space Weather

The Panel also received presentations from outside organisations including a presentation by Groundwork Caerphilly on their Healthy Rivers programme

Sustainable Development Core Group

The Sustainable Development Core Group was established in 2000 to implement SD initiatives within the authority. Following the establishment of SDAP it provides support to SDAP, and together the 2 groups co-ordinate the mainstreaming of sustainable development in the Council and in the wider County Borough.

The Core Group is made up of officers from different Services across the authority. It is chaired by the Chair of SDAP to provide a link and to ensure the effective working relationship of the two groups.

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 at: <http://wales.gov.uk/docs/desh/policy/100528susdevcharteren.pdf>

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:

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

Calculated as:

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, both based in Japan. 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 encourages people to live a more sustainable lifestyle by Living Better and Using Less. The website is currently being revamped and will go live in May 2014. It will have five sections focusing on sustainable living, sustainable schools, the living environment, the rural development programme and sustainable council/ businesses as well as continuing to feature the online questionnaire, the Caerphilly Sustainability Index, which allows people to find out how sustainable they really are.

The website, provides useful information for schools, businesses, residents and staff to help them adapt a more sustainable lifestyle, reducing costs, carbon emissions and their impact on the environment. The website will be updated as and when required to ensure the information provided is relevant to users.

For further information Visit: www.sustainablecaerphilly.co.uk

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.

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 to begin to take practical action to address their impact.

All Wales Travel Plan Award

The SD & LE Team have been working with Sewta over the past few years to incorporate various sustainable transport initiatives into the Authority. As part of this work the council 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, 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

Nine events promoting sustainable travel, and highlighting the support and initiatives available to staff to enable them to travel more sustainably were run in 2013/14. 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 and the Active Travel Week.

National Bike Week

National Bike Week (June 17th to 21st 2013) 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. Twenty-two 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.

National Standards Cycle Training

Funding had been secured from Sewta to provide cycle training for schools and staff during 2013/14. The funding covered 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.

Cycle to Work Salary Sacrifice Scheme

The Cycle to Work Salary Sacrifice Scheme, which was launched in June 2010 to encourage staff to cycle to work, is still ongoing. 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 2013/14. To date 360 employees have signed up to the scheme.

The SD Team supported the tender and interview process, which has just finished to appoint new providers for CCBC Salary Sacrifice schemes, including the cycle to work scheme, child care scheme and staff reward scheme.

Pontllanfraith Pool Bike Scheme

Pontllanfraith House has 13 pool bikes (4 mountain bikes, 4 hybrid 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.

Penallta House Pool Bike Scheme

Penallta House has 6 bikes (3 mountain bikes and 3 hybrid bikes) available for staff to use for leisure purposes during the lunchtime period and after work/ during weekends 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.

Lockers have also been installed at Penallta House to support staff cycling to and from work or during the lunchtime period.

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 continues to promote the carshare scheme and associated walk budi and cycle budi schemes. A total of 42 dedicated car share spaces have been designated at the 6 main sites. To date 366 members of staff have 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 has work with HR and Payroll to ensure that systems are in place to capture information on the CO₂ savings achieved by the scheme

During 2013/14, 87 cars were delivered with a further 24 awaiting delivery. This gives a total of 306 cars delivered since the scheme began. 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 SD Team worked with Let's Walk Cymru to help them develop the Let's Walk Cymru Pedometer Challenge Wales website, which is now free for any organisation or individual in Wales to use as part of their own pedometer challenge. The team provided advice and feedback on the website using evaluation data from previous CCBC Pedometer Challenge events. The Let's Walk Cymru Pedometer Challenge Wales website was then used as part of the 2014 CCBC Pedometer Challenge, which enabled us to provide additional feedback during the challenge period.

The CCBC Pedometer Challenge was held over 8 weeks from February 3rd to March 30th 2014, catering for all CCBC employees.

The aims of the challenge were:

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

The challenge was a huge success attracting 59 teams. Teams consisted of between 1 and 25 people. In total over 700 employees took part, with 437 formally submitting data via the website.

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 eight weeks of the challenge was 68,175 miles, nearly 3 times around the world
- The majority of participants do less than the recommended 10,000 steps per day.
- Members of the winning team walked an average of 766 miles over the eight weeks of the challenge.
- The top individual of the challenge walked 1,008 miles over the eight weeks of the challenge.

Following the success of the third CCBC Pedometer Challenge the aim is to continue 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.

CCBC Active Travel Week

The SD & LE Team held an Active Travel Week in September 2013, in partnership with 'Lets Walk Cymru', to encourage staff to be more active, to be more aware of the health benefits of exercise and travel more sustainably.

The week involved a variety of activities including free swim, gym inductions, one months corporate membership and exercise classes. Led cycle rides, Dr Bike sessions, free breakfasts for staff walking and cycling to work, free health checks and blood pressure checks and road shows at the main council buildings.

The week was a success with 23 subscriptions for corporate membership, 20 free swims and 3 gym inductions accessed. The Dr Bike sessions were fully booked for the 3 days with staff utilising the free bike check and service. Unfortunately due to the adverse weather conditions during the week, the led cycle rides were not as popular, along with the free breakfasts/ lunches for staff walking/ cycling to work.

Cycle Maps Project

Working in partnership with the CCBC Transport section and Sustrans to develop a strategic cycle map and five 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 are being designed so they can be downloaded and printed directly from the website, with approximately 10,000 being printed to be distributed to residents and visitors as and when required.

The maps are currently with the map and leaflet designers and should be finished and available by July 2014.

Fairtrade

Fairtrade Fortnight 2014

During Fairtrade Fortnight (February 22nd to March 9th), the Fairtrade message was promoted to staff via the intranet. 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 2013/14 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.

Planning

The SD&LE Team is based within the Authority’s Regeneration and Planning Division. It has close links with the Planning Teams and also provides support and advice to local people making planning applications to enable them to make their developments more sustainable.

The One Planet Development

The One Planet Development policy stems from Wales’ Sustainable Development Scheme, called “One Wales: One Planet”, which includes an objective that: “within the lifetime of a generation, Wales should use only its fair share of the earth’s resources, and our ecological footprint be reduced to the global average availability of resources – 1.88 global hectares per person in 2003”. In 2006 the ecological footprint for each Welsh citizen was 4.41 global hectares.

One Planet Developments must, according to the Welsh Government guidance:

- Have a light touch on the environment – positively enhancing the environment where ever possible through activities on the site.
- Be land based – the development must provide for the minimum needs of residents in terms of food, income, energy and waste assimilation in no more than five years.
- Have a low ecological footprint – the development must have an initial ecological footprint of 2.4 global hectares per person or less with a clear potential to move to 1.88 global hectares per person over time – these are the Ecological Footprint Analysis benchmarks for all One Planet Development
- Have very low carbon buildings – these are stringent requirements, requiring that buildings are low in carbon in both construction and use.
- Be defined and controlled by a binding management plan, which is reviewed and updated every five years.
- Be bound by a clear statement that the development will be the sole residence for the proposed occupants.

Caerphilly County Borough Council received a planning application for a smallholding at Nant-y-Cwm Farm under the One Planet Development legalisation. The SD&LE Team worked closely with Development Management to input into the evaluation of application and interpretation of policy.

After a very detailed process Nant-y-Cwm Farm became the first One Planet Development in Wales to receive permanent planning permission. The 16-acre site is home to Dan and Sarah Moody and their five children. As part of the process Dan and Sarah produced a detailed management plan and ecological footprint analysis which demonstrates their commitment to sustainable living, including how they will provide for at least 65% of their basic household needs from land based activity within 5 years.

In addition to producing meat, eggs and a wide range of fruit and vegetables, some of which is sold to local residents, the smallholding also supports different local causes. Kaleidoscope, the Cardiff based charity is one example, through which people recovering from drug and alcohol addiction come to help out and gain useful experience.

Jane Davidson, previously the Welsh Minister responsible for the introduction of the One Planet Development policy and now Director of INSPIRE at the University of Wales Trinity Saint David, commented “I was delighted to hear about the Moodys’ success with their One Planet Development application. Wales is unique in having a national commitment to support those who want to demonstrate that it is possible and desirable to live in a way that reduces their impact on the environment. I hope that the success of this application will pave the way for others who want to pioneer living lightly on the land and in doing so help others think about actions they could take to harness local resources better”.

Review of the Local Development Plan (LDP)

Caerphilly County Borough Council was the first Council in Wales to adopt an LPD in November 2010. The LDP identifies where new developments such as housing, employment, community facilities, and roads, will go. It provides a framework for local decision-making and brings together both development and conservation interests to ensure that any changes in the use of land are coherent and provides maximum benefits to the community. The SD & LE Team was heavily involved in the process, in particular contributing to the Sustainability Appraisal(SA) and

Strategic Environmental Assessment (SEA) of the plan. The Team Leader was also a member of the high level LDP Focus Group.

The Annual Monitoring Report undertaken in 2013 identified that due to the change in the economic climate the number of houses being constructed in Caerphilly had declined, and thus general housing targets are not being met and Affordable Housing targets were not being achieved. Further to this, the 5-year land supply that is required is not being attained and the supply currently stands at 3.5 years.

On this basis, it was agreed that a review of the LDP would be undertaken. The SD & LE Team has again been heavily involved in the SA/SEA work and contributed to the LDP Focus Group.

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 265 Multi Function Printers (MFPs) have been deployed across the Authority. The last remaining copiers have been replaced.

An average of 341,000 sides of paper were printed per week, 74% in mono and 26% in colour. The duplex rate of 58% has saved just over 20 million pages (equivalent to 2,450 trees or 101 tonnes of paper) since MFPs were introduced in 2008. This equates to approximately 80,000 pages per week at present. 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 had 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 had been highly impressed with the level of management and analysis of data that CCBC had developed as part of its print strategy.

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.

The PretonSaver product reduces the toner per page by approximately 25% and as such the

authority uses 25% less toner cartridges. Each toner cartridge contains 4.5 litres of oil so this is making a big impact on sustainability and reduces transport on the road delivering toners.

ICT Services continue to analyse and monitor the authorities printing patterns and will work with the relevant parties to reduce usage, maximise efficiencies and hopefully reduce costs. Priority must go to decreasing the use of colour and increasing the use of duplex.

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 only 5% of monitors are not of the flat panel type. 85% are Flat Panel and the others are currently unknown Make and Models. ICT Services is continuing to work with schools to increase the use of low energy flat panel monitors.

The re-use and secure disposal 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. 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 ECO Systems IT Disposals, a third party supplier accredited to the highest disposal and security standards, as part of the WEEE Legislation.

Disposed

Base Unit	413
Laptop	225
Monitor	386
Printer	163

Donated

Base Unit	58
Laptop	56
Monitor	35
Printer	2

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 user's mouse and keyboard as if they are actually sat with the user. This has achieved a dramatic reduction 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

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 with it's 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.

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

Carbon Reduction Strategy

The SD & LE Team works closely with the Energy & Water Team, and the Corporate Carbon Management Group to promote energy reduction initiatives and to install renewable energy systems. 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%)

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 2013/14.

Invest to save

The Authority is actively pursuing energy savings that can be achieved by installing energy saving technology such as insulation to prevent heat loss and control equipment such as movement detectors on lighting or voltage optimisation equipment. A significant drive, led by the carbon group, has resulted in all schools insulation being upgraded, and there has already been a number of technology upgrades to reduce carbon emissions through invest to save schemes throughout 2013/14.

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

Asset management

The Authority is actively managing its assets to reduce energy use and costs. A programme of replacing old inefficient school buildings with new buildings is ongoing. The new schools have many energy efficient properties, including up rated insulation levels beyond building regulation requirements. They also include energy efficient lighting and controls, and sophisticated Building Energy Management Systems.

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.

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

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 2013/14.

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

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 bids for Arbed projects at Fochriw and Hollybush.

Fochriw

The scheme at Fochriw has been ongoing since October 2012 and is nearing completion. Improvements have been carried out to some 350 homes included external wall insulation, replacement of old boilers with higher efficiency boiler / heating systems and voltage optimisation. 68 Council Properties were added to the Welsh Government project at Fochriw. All properties received external wall insulation, whilst mix of the following would have been installed where required loft insulation and voltage optimisation. The works are being undertaken in Pontlottyn Road, Heol y bryn, Hillside and Cae Glas Newydd.

Hollybush

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.

An application for funding was submitted to the Welsh Government under phase II of the Arbed initiative

Hollybush was one of the two successful areas in the county borough under Arbed II funding. The revised project involves extending the existing gas mains network to the village and to install gas central heating to each property. Works commenced in 2013 to install gas main to the village. The work will be ongoing throughout 2014 to install the full gas central heating systems for residents.

Developing a Climate Change Adaptation Plan

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 January 2012 the Minister for Environment & Sustainable Development published new statutory guidance, setting out what is required of us. The guidance is in 5 parts.

Part 1: Starting. Sets out what is meant by 'preparing for a changing climate', and showing why it's important and worthwhile. It highlights some linkages with other work, for example with sustainable development, and suggests what good preparation might look like. It also involves learning about how the climate has already changed, how an organisation has been affected by weather in the past, and what we are already doing that counts as preparing for climate change.

Part 2: Investigating. This involves refining the climate change impacts identified in Part 1, and identifying levels of sensitivity and adaptive capacity. It also includes a climate change risk assessment that explores the likelihood and consequence of each impact and provides your organisation with a list of prioritised impacts to develop actions for in Part 3.

Part 3: Planning. This stage leads to an adaptation plan using information generated by previous investigations carried out in Part 2. It includes setting aims and objectives, identifying and prioritising adaptation options, and establishing baseline data and indicators, which help with monitoring and reviewing in Part 5.

Part 4: Implementing. Part 4 discusses implementation of the adaptation plan produced in Part 3. It also addresses the need to build the adaptive capacity of the organisation and partners through training and communication, as well as delivering and managing `adaptation actions.

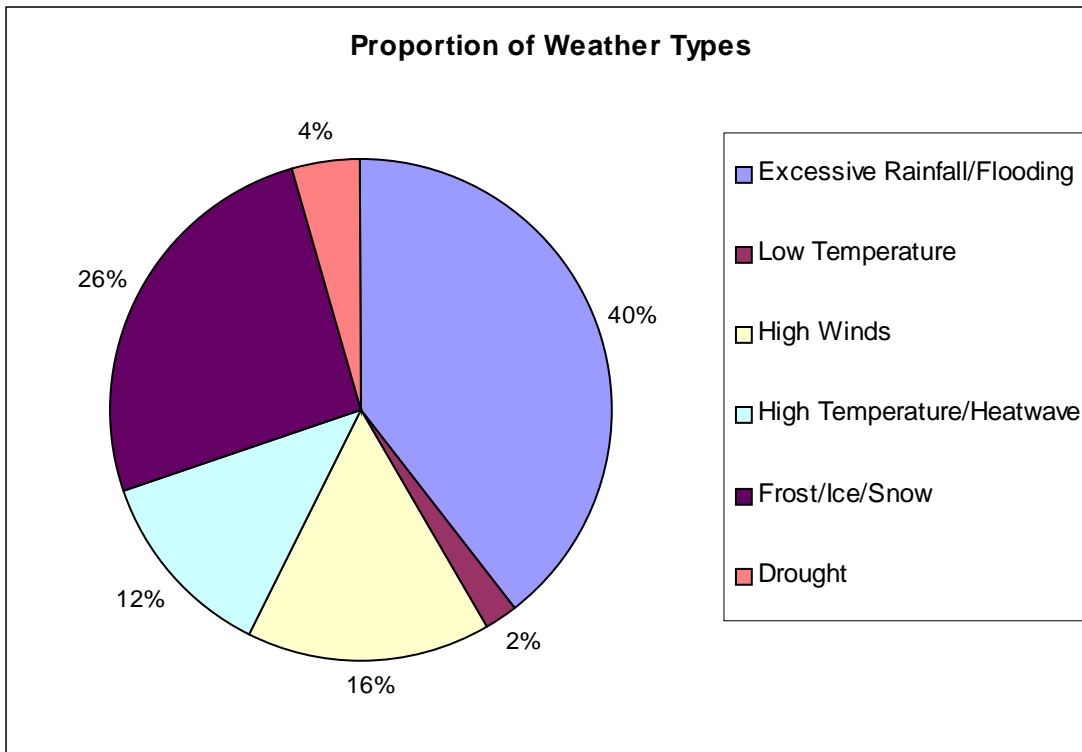
Part 5. Reviewing. The principal goal of Part 5 is to determine whether the aims and objectives set out in your adaptation plan are being achieved. Reviewing allows for new climate information and any lessons learned to be captured and fed into the process, which should be seen as ongoing.

The guidance recommends the development of a **Local Climate Impacts Profile (LCLIP)**. An LCLIP is one of a suite of tools created by UKCIP to help organisations adapt to climate change.

The SD & LE Team has begun the process of producing an LCLIP for Caerphilly county borough. A database of extreme weather events, between 2003 and 2013, has been collated by reviewing local media reports and interviewing key stakeholders.

The study identified 89 events of severe weather:

- 35 excessive rainfall/flooding events
- 23 frost/ice/snow events
- 14 storm/high wind events
- 11 Events of high temperatures/heatwave
- 4 Events of drought
- 2 Events of low temperatures/cold spells



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 2013/14 to improve links between Groundwork and Services within the Authority, and to promote their work.

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:

- Developed a youth ESDGC Toolkit to support youth workers incorporating ESDGC into the youth work programme. This is currently being trialled with five youth groups in the Caerphilly county borough.
- 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 and was trailed with five youth clubs within the Caerphilly county borough over an 18-month period..

Out of the five youth clubs to trial the award, one has achieved their silver award and one the bronze award. The other three are waiting for an assessment to determine their award level. All five youth clubs found the award criteria easy to incorporate into their youth work scheme of work. Following the success of the trial, the award scheme will be rolled out to all youth clubs in the Caerphilly county borough during 2014.

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 Training

Eco School training was held for 46 primary and secondary school teachers over three sessions to support schools working on the eco schools programme. The training was promoted to schools in the Caerphilly county borough, to support them progressing through the Eco Schools programme.

The training covered the whole Eco School process to provide additional support for schools holding the Bronze and Silver awards, working towards their Green flag award. The training also looked at the Platinum criteria for schools working towards their Platinum award. Follow up sessions were then held to monitor the progress of the schools going for their awards and to provide additional support if required.

ESD & GC Resource Boxes

The twenty two resource boxes, developed to support schools and youth groups incorporating ESDGC into the curriculum and youth work programmes have been reviewed and updated with additional lesson plans and curriculum links. The resource boxes contain books, CD's artefacts, curriculum links and lesson plans and are loaned free to schools on a half term basis. The majority of the resource boxes have been booked every term with 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 and guidance on the Estyn inspection framework and the evidence required for ESDGC.

The toolkit was launched via governor networks and through the Governors Wales network and was presented to CCBC Governors in February 2014, prior to being circulated to all CCBC School Governors. 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 has been 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 Eco Early Years award was launched in October 2013 at a training event held for all settings working on phase 2 of the Healthy Early Years Scheme and will be trailed over 12 months with a variety of settings and childcare providers. To date one setting has already achieved the gold award, with a few settings waiting to be assessed.

Eco Early Years Training

An Eco Early Years training day was held in October 2013 in partnership with the Early Years Team to support early years settings incorporating ESDGC into their curriculum and management. The aim of the training 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. The main workshop for the training session looked at developing the outdoor environment, showing providers how to make mini beast houses, plant wildflower meadows and plant certain things to attract wildlife into the garden. The workshop focussed on reusing materials to develop the outdoor environment, showing the providers how to improve areas with little or no cost to the setting.

Approximately 40 early years providers attended the training day from settings throughout the Caerphilly county borough to learn more about sustainable development and global citizenship. The training day 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 has been 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 2013/14 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 awards and platinum awards.

By 31st March 2014, all 91 schools had achieved an Eco School award. Out of the 91 schools with an award, these are broken down into 7 Bronze awards, 22 silver awards and 61 Green Flag awards (including 15 second green flag awards and 22 third green flag awards). To date an amazing 67% of our schools hold the Eco School green flag award.

Eleven schools in the county borough have also achieved the prestigious Eco School Platinum award to date, these are:

St Gwladys Bargoed

School,

Llanfabon Infants School,

Ysgol Gynradd Gymraeg

Caerffili,

Cwrt Rawlin Primary

School,

Bedwas High School,

Tyn Y Wern Primary

School,

Plasyfelin Primary School,

Gilfach Fargoed Primary

School,

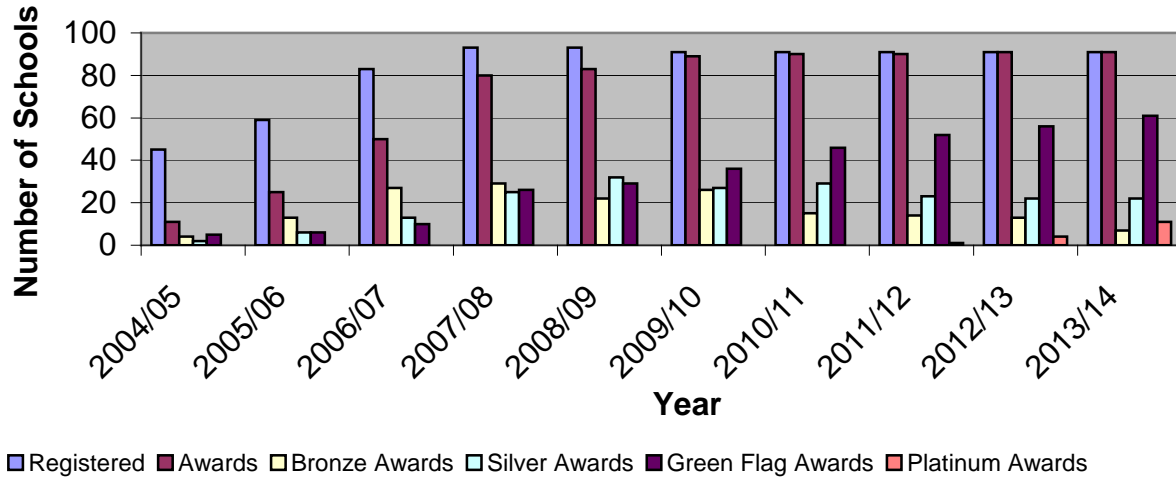
Markham Primary School,

Llancaeath Junior School

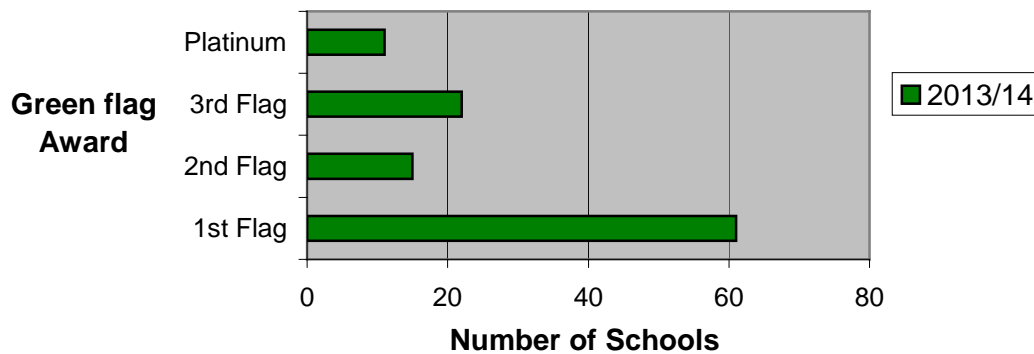
Cwmaber Junior School.

This is a huge achievement with only approximately 95 schools in Wales achieving the Platinum award.

Number of Eco Schools



Eco School Green flag Awards



Eco School Support

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

- 73 individual school visits made to support schools working through the Eco School programme.
- 7 Eco School Green Flag assessments undertaken for neighbouring authorities.
- 12 Eco School Pre Green Flag assessments undertaken for schools in the Caerphilly county borough

- Supported 12 schools renewing their Eco School Green Flag status to ensure that don't lose their Eco School Green Flag status, in line with the new Eco Schools Green Flag two year Renewal Policy.
- Eco School training was run over three sessions supporting 46 schools working towards their Eco School Green flag award and/ or Platinum award. The training covered the whole Eco School process to provide additional support for schools holding the Bronze and Silver awards, working towards their Green flag award. The training also looked at the Platinum criteria for schools working towards their Platinum award. Follow up sessions were then held to monitor the progress of the schools going for their awards and to provide additional support if required.
- 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.
- An Eco School Celebration event was held at Bedwas High School to congratulate the 61 schools for achieving the Eco School Green Flag award and/ or Platinum award. 80 pupils attended the event along with teachers, headteachers, councillors and officers to celebrate their achievements and take part in a unique 'World of Ogs' workshop. Through storytelling and creative eco art and craft everyone had the chance to express their creativity by turning old clothes in to unique and quirky Og characters.

Fairtrade

Caerphilly Fairtrade Group

During 2013 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-one schools have signed up for the Fairtrade Schools Scheme to date.

Fairtrade School Training

14 schools have participated in Fairtrade School training sessions, which have been run to support schools working towards achieving Fairtrade School Status. The training has been run over three twilight sessions giving teachers the opportunity to work through the scheme whilst attending the training. Fairtrade resources have also been provided to the schools participating in the training to support them incorporating Fairtrade into the curriculum.

To date seven schools in the Caerphilly county borough has achieved Fairtrade School status, with the remaining schools working towards becoming a Fairtrade School as part of their Eco School programme.

The seven Fairtrade schools are Ysgol Y Lawnt, YGG Caerffili, Tir y Berth Primary, Hendredenny Park Primary, Fochriw Primary, Cefn Fforest Primary and St James Primary School.

Fairtrade School Workshops

Five Fairtrade school workshops were held during 2013/14 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.

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 2013 awards event, following on from the successful 2011 and 2012 events 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 2013 awards following the success of the previous events.

ESDGC – Literacy & Numeracy Framework Resources

The ESD Officer has been working with the All Wales ESD Officer Group to map ESDGC against the new Literacy and Numeracy Framework, to identify how these areas can be taught using ESDGC.

ESDGC has been mapped against the Literacy and Numeracy Framework for year's 2, 6 and 9, with suggested activities, website links and resources for each of the elements within the framework. These documents will help schools embed the requirements of the new Literacy and Numeracy Framework within their curriculum planning and include ESDGC as a theme for classroom teaching.

Green Grins Index – School Sustainability Index

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

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 www.greengrin.co.uk or 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 has been developed in partnership with Eco Schools Wales and the CCBC Healthy Schools Team. The resource includes 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 is suitable for primary schools and the lower year groups of secondary schools. The resource will be launched in June and distributed to schools during the summer term.

SSE (Swalec) School Project

A partnership project has been established with SSE (Swalec) to provide educational visits for schools six times a year. Participating schools visit the SSE site in Treforest for a 2-hour interactive tour with workshops to learn about renewable technology and energy efficiency.

Eco School Promotional Film

An Eco School film has been developed to promote the Eco School achievements within the Caerphilly county borough. Filming was undertaken at five schools 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 is available for viewing via the councils website and the sustainable schools website.

Sustrans Lesson Plans

Working with Sustrans to help them develop lesson plans for schools in Wales, incorporating sustainable transport into geography, history, science, English, PE and DT. The lesson plans have been trialed by a selection of schools in the Caerphilly county borough to provide feedback on the content and identify key curriculum links. They are now being tweaked by Sustrans and will be freely available for schools in Wales during the summer term.

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

As part of Phase 2 we installed solar PV systems on the following schools:

- Park Primary School
- Deri Primary School
- St Gwladys Bargoed
- Aberbargoed Primary School
- Gilfach Fargoed Primary School
- Phillipstown Primary School
- YG Gilfach Fargoed

We are also looking to install a solar PV array on the Aberbargoed Education Centre, depending on the results of the structural surveys for the building and a suitable construction method for the building materials.

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 had been secured from Sewta to provide cycle training for schools during 2013/14. The funding covered 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.

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 2013/14 include governor training, global citizenship links for primary and secondary schools and investigating grant funding for ESDGC projects.

ESD & GC Partnership Support

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

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 again sponsored the award for the environment category in 2013/14. This year it was won by "Accessory Express" a team from Cwmcarn High School. They purchased old Jewellery from charity shops and "upcycled" them/ cleaned them up and sold them on.

Greener Caerphilly

The Sustainable Development & Living Environment Team co-ordinated the Living Environment Partnership, which was one of the 4 thematic partnerships of Caerphilly's Community Strategy. In April 2013, the Caerphilly Local Service Board (LSB) and partners in the county borough approved "Caerphilly Delivers" – the LSB Single Integrated Plan (SIP) for the county borough.

Caerphilly Delivers, sets out a partnership vision for Caerphilly, of "sustainable communities, supported by actions that enhance the quality of life for all". This means people who:

- Are healthy, fulfilled and feel safe.
- Are well qualified and skilled
- Are within a vibrant economy.
- Live, work or visit in a greener living environment.

To realise our long-term vision the strategy identified five key outcomes:

- A Prosperous Caerphilly
- A Safer Caerphilly
- A Learning Caerphilly
- A Healthier Caerphilly
- A Greener Caerphilly

A key focus of the work of the SD & LE Team in 2013/14 has been to ensure the integration of sustainable development and living environment issues into the Single Integrated Plan for the county borough.

The "Greener Caerphilly" section was based on the priority environmental issues identified and consulted on by the Living Environment Partnership. The box below 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.

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/content/single-plan-consultation>

Community Schemes Programme

Each year the Council make a budget available for community orientated projects that maintain or enhance 'community assets'. This includes the type of work carried out by the Community Response Team such as the repair of seats, the replacement of vandalised street furniture and hard landscaping and other small items of maintenance work.

The SD Team co-ordinates a programme of work to take forward small community focused projects, empowering local community groups, and at the same time adding to the sense of a well kept county borough. In 2013/14 Community Scheme funding supported 3 programmes run by the SD Team:

- Climate Change Woodlands
- Local Environmental Quality
- Environmental Volunteers

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 2013-14, five Climate Change Woodlands were planted:

Graig Y Rhacca FC Woodland

The project aimed to develop a woodland area to increase the security and condition of the playing fields in Graig Y Rhacca. Groundwork Caerphilly had carried out a project at Graig Y Rhacca FC to install pitch barriers, and a proposal was developed to further improve the site with the addition of a small woodland on the south side of the pitch.

On the south side of the field there was an area of wasteland with a main road running parallel to the site. The club have been faced with the problem of footballs running onto the road and causing problems with traffic on the busy road. The club's players and fans have been at great risk trying to gather them. The proposed planting would help to secure the site to ensure that this no longer happens. The trees planted will also further help the site with drainage and further improve the condition of the field. The project also provided the opportunity to undertake a community planting event to raise awareness of environmental issues and of climate change with the club and the local community.

A planting event was arranged and 34 children and adults planted over 100 trees.

Glen View Terrace, Ynys Ddu - Community Tree Planting

Caerphilly County Borough Council's Countryside and Landscape Service and Groundwork came together to organise a two day event in early spring 2014 to create a new community woodland at the rear of Glen View Terrace in Ynysddu as part of a scheme to improve the area for wildlife.

Pupils from Ynysddu Primary School and volunteers from Future Steps, a project aimed at getting people skills to get back into work, and students from Ystrad Mynach College, all helped to create

the new woodland. Community spirited local residents also got involved when they saw the transformation taking place and joined in to help plant over 1,000 trees

Photos and a short video of the event can be found at the following weblinks.

Youtube : <http://youtu.be/yFQTggRpRYY>

Flickr : <https://flic.kr/s/aHsjW8kQFN>

Incredible Edible Orchard, Ynys Ddu

The Incredible Edible project is part of the continuing community involvement and awareness raising work being undertaken by Ynys Ddu Primary School in the school grounds and its surrounding area. A large area was identified where it was possible to plant, fruit bushes, fruit trees and perennial vegetable, including herbs. The aim was to enhance the school grounds and to educate the community along with the Children.

Eventually the hope is that the community and children will use the produce, either by helping themselves or by taking items offered by the children on their produce stall. The project encourages a healthier diet and bringing back lost skills such as jam making, preserving and growing

Planting included:

Fruit Trees: Apples, Pears, Cherries, Plums, Figs

Fruit Bushes: Gooseberries, blueberries, blackcurrants, quince

Fruit Hedges: Loganberry, Blackberry, Raspberries, Damson.

Raised Beds: Rhubarb, herbs, spinach and other seasonal veg.

Taraggan Educational Gardens

Taraggan Educational Gardens established July 2007 is a highly successful award winning community initiative. The group obtained permission to utilise and manage an area of land adjacent to their allotment site as a woodland. The tree planting initiative has enabled them to extend their community initiatives and activities within Gilfach estate. The project has been used as a way of engaging local people and raising awareness of Climate Change issues.

Volunteers and members of Taraggan planted 59 Willows, a mixture of standards and whips within their extended grounds. The scheme has created a Willow woodland and Willow hedging, providing both wildlife habitats and materials that can be harvested to use for weaving and other craft making activities.

Upper Sirhowy Valley

Pupils from Markham Primary School joined Countryside Rangers to learn about the environment and climate change, and to plant 50 fruit trees to create an orchard at the Rock, Blackwood.

Local Environmental Quality

The Greener Caerphilly Outcome Group manages the Community Scheme 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 4 projects in 2013/14.

Pride in your pitches

Dog fouling and litter on the sports pitches in the county borough was identified as a major issue, affecting the health of those participating in sport, and preventing others from taking part in sport.

The “Pride in your Pitches” project engaged with local sports clubs to encourage and enable them to take greater ownership of the condition of their own pitches. This included sending information, guidance etc. to every club, to raise awareness of the health and environmental issues. Clubs were reminded of their responsibility to clean up their litter, drinks bottles etc. after their matches.

A high profile launch event was held, hosted by a well know international rugby referee Nigel Owens.

Packs were provided containing litter pickers, gloves, bags, poop scoopers etc to allow clubs to clean their pitches effectively and safely. Promotional materials including branded training tops and post defenders displaying the pride in your pitches message were provided to encourage clubs to participate.

A programme of checking on pitches and issuing Fixed Penalty Notices to those who allow their dogs to foul, or participants who fail to remove their litter after their games will also be put in place as part of the initiative.

Healthy Rivers/River Schools

The Healthy Rivers and Rivers schools projects are partnership projects co-ordinated by Groundwork Caerphilly and involving the South East Wales Rivers Trust (SEWRT), Natural Resources Wales (NRW) and CCBC. The projects were established with the aim of removing the barriers to salmon migration up the River Sirhowy, engaging local people, and undertaking environmental improvement to the River Sirhowy to improve its Ecological Status under the Water Frame Work Directive (WFD).

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 were undertaken for the whole length of the river. The surveys identified issues that were impacting on fish populations and other aspects of the ecology on the Sirhowy River. The results of these surveys confirmed the presence of barriers to migration, a key constraint on the Sirhowy reaching its full ecological status. It was identified that the removal or modification of these barriers would improve fish passage and would open up large sections of the upper catchment to migratory species.

Since the start of the Healthy Rivers programme, 5 barriers to fish migration have been removed or modified including Gibbs Weir, Penmaen Weir and Markham Colliery Tunnel. This has made a further 13km of the river Sirhowy accessible to migratory fish.

Gibbs Weir

Gibbs weir was the first and largest barrier to fish migration on the River Sirhowy. The weir was installed in the 1960s as part of a project to straighten the river to create space for a new industrial estate at Penmaen, Blackwood. The weir created a barrier that was too large for migratory fish to

jump over as a result the fish became trapped, or they would exhausted themselves in an attempted to jump the weir as a result fish would die or lay their eggs in less suitable habitat downstream. The weir was also a site that attracted large numbers of poachers; the fish became easy targets for poachers who would remove large numbers of fish from the river.

A proposal to install a hydro electric scheme on the weir with a fish pass around the outside proved not to be viable, and after consultation the weir was completely removed in 2013 by Natural Resources Wales and replaced by a rock ramp. The rock ramp provides a number of small weirs across the river channel that migratory fish can easily jump.

Once the weir was removed and rock ramp was completed Healthy Rivers coordinated the spraying of Japanese knotweed on site and arranged for a group of 20 students from Ystrad Mynach College to plant a new hedgerow along the new fencing.

Penmaen Weir

Penmaen weir, approximately 200m upstream of Gibbs weir, posed the next significant barrier or obstacle to fish migration across the river particularly in low flow conditions. Penmaen weir is a concrete weir with a notch in the centre the weir with a difference of 1m between the upstream and down stream river levels. It was not feasible to remove the weir completely due to bank stability concerns and a gas pipe that crossed the river upstream of the weir; instead a contractor was hired to install a block stone pre-barrage. The pre-barrage creates a second smaller weir to create a deeper pool below the weir therefore creating two small jumps for migratory fish rather than one large jump.

Tree removal and bank revetment Chartist Bridge

During the winter storms of 2012 a large section of steep riverbank was washed away by the river, causing 10 large trees to fall across the river blocking the channel. The trees were a barrier to fish migration as they completely blocked the river channel the trees also collected large quantities debris that was floating down stream. The trees were removed using a large excavator. A number of additional trees were also felled that were likely to fall into the river in future stormy weather. The timber that was removed from the river was used to construct a river deflector to direct the main flow away from the damaged riverbank. The tree trunks were also used to physically protect the riverbank from further erosion.

Salmon in the Classroom

The Healthy Rivers Officer set up a salmon hatchery in the Groundwork Caerphilly classroom. South East Wales Rivers Trust provided some 100 salmon eggs and equipment. The hatchery consisted of a fish tank, a cooling system to keep the water below 10°C and a filter to aerate the water and remove waste. Local primary schools were invited to the classroom to see the eggs and young salmon and to learn about the lifecycle of the salmon and issues that are affecting the river Sirhowy. Pupils from 7 local primary schools and 1 scout group visited the salmon hatchery, in total 500 children saw the young salmon and learnt about their life cycle.

The salmon in the classroom has been hugely successful the pupils continued to do their own research and learning about salmon and have made displays in their schools. Pentwynmawr Primary school put together video presentations about the salmon and what they had been doing to improve the river habitats, these were then presented by the pupils to the Institute of Fisheries Management tour in October 2013.

The pupils that had been involved with the Salmon in the Classroom project had the opportunity to release the young salmon that they had watched develop in to the river. The school pupils released the salmon at various locations along the Sirhowy in July.

<http://www.youtube.com/watch?v=oRQm3aXgm7U&safe=active>

River clean ups

Healthy Rivers also worked with volunteers to carry out river clean ups at various locations along the river Sirhowy. Crosskeys Litter Picking group removed 26 bags of litter from the river and river banks along with large items such as electrical power tools, bikes, and plywood sheets. 13 volunteers were involved in the project.

Following on from their Salmon in the Classroom session Pentwynmawr Primary School Eco Club wanted to take part in a river clean up. Healthy Rivers arranged for the school Eco Club and parents to litter pick the banks of the River Sirhowy at Woodfieldside, Blackwood. The pupils removed 10 bags of litter along with some large items that included a beer keg, tent and traffic barriers.

Three dumped cars were removed from the river channel at Markham Tunnel. The project involved working with partner organisations; Keep Wales Tidy and Natural Resources Wales. The cars, which had been abandoned at the bottom of steep banking before being set on fire, were winched out using a hand winch and were then recycled.

A river clean up at Hollybush removed large items of rubbish from the river channel including shopping trolleys, bikes, wheelbarrows, sheet plastic and children's play equipment.

The Healthy Rivers project has proved to be a huge success, and this was confirmed with discovery of salmon nests north of Blackwood. This is the first time that this has occurred in over 100 years.

The discovery generated a large amount of media interest; the South Wales Argus saw the story on the Groundwork Caerphilly Facebook page and ran a story in the paper, this then attracted interest from BBC Radio Wales who invited Hywel to talk about the Healthy Rivers programme on the radio.

Go Wild!

Local Environmental Quality funding was provided to support the local biodiversity partnership event called 'Go Wild'. Over 100 partners, including organisations, groups and individuals, participated in the event, such as the Wildlife Trusts, Hedgehog Helpline, bird and butterfly clubs.

This year the theme was pollination and the importance of pollinators (bees, butterflies, hoverflies, beetles and thrips) for maintaining our biodiversity and for human food production. Several activities will be run based on this theme.

Ideal weather and a variety of hands on, pollinator related activities brought nearly 5,000 visitors to the Go Wild! event in Pontllanfraith on the 8th June, creating a buzz for the visitors and the natural pollinators such as bees, butterflies, moths, beetles and hoverflies.

Children fought for the survival of their hive on the 'Battle of the Bees' obstacle course by collecting as much pollen as they could whilst being sprayed with pesticide/water; they threw seed-bombs to create a wildflower meadow and created seed bombs to take home to plant in their own gardens

It is a family event with live animal displays and lots of free expert information and advice. All food for sale at the event is locally sourced and, where possible, organic.

Throughout the day, experts were on hand to raise awareness and to provide advice on ways to help protect our native pollinators. Go Wild! was organised by the council's Countryside and Landscape Service on behalf of the Caerphilly Biodiversity Partnership.

Go Wild! Pollinators

The Go Wild! Pollinators Project was organised through Caerphilly County Borough Council, Countryside and Landscape Service on behalf of the Caerphilly Biodiversity Partnership aimed to raise awareness of the importance of insect pollinators, in Caerphilly County Borough, and the benefits they provide to the natural environment, and to the local farming and horticultural economy.

The project aimed to encourage landowners and land managers to increase the availability of native wildflowers and plants for insect pollinators and supported a small number of practical projects that will encourage pollinators in 2014 and beyond. Practical projects included visits to the farms and allotment sites, provision of advice to farmers and allotment holders, supplying seed mixes and where necessary arranging for cultivation and seeding.

Following initial contacts with farmers and allotments, a total of three allotment sites and three farms took part in the project.

Areas have been identified at each site, ground preparation has been undertaken, and seed provided to each participant. The participants have been provided with written instructions on how to prepare the ground and apply the seed, together with information on aftercare. The participants will be visited later in the year to provide continued advice during the establishment phase of the wildflower meadows.

Environmental Volunteers

The Environmental Volunteers programme provided support and training to allow volunteers from the local area to get involved in projects, to learn new skills and to improve their local environment. Courses provided include knapsack pesticide spraying, brush cutter use, river fly monitoring and wood chipper training.

Invasive species

Funding was provided to allow volunteers on the Healthy Rivers project to go on training courses including knapsack pesticide spraying, The volunteers then used the skills that they had learnt to take part in river improvement projects. Volunteers that completed the knapsack spraying course took part in spraying Japanese Knotweed along the banks of the river Sirhowy with the invasive

species officer from CCBC. In total Healthy Rivers staff and volunteers worked with the invasive species officer to spray 4.5km of the river.

River fly monitoring and river safety and rescue

Volunteers were trained to undertake river fly monitoring. Monitoring river fly is an important way of checking on the health of a river and can be an early indication of pollution. Volunteers assisted Healthy Rivers staff and ecologists from CCBC to carry out river fly monitoring along the Sirhowy and Rhymney Rivers

Rights of Way volunteer support and equipment

Funding for equipment and materials was provided to support the Rights of Way programme. Projects involving Rudry Volunteers and Islwyn Bramble Busters were undertaken. Work in 2013/14 by the Rights of Way Volunteers includes:

- 3km of clearance work has been undertaken on the PRow network, this has primarily being carried out in the East and South of the County Borough
- Installed 10 waymarking posts this includes Fingerposts
- Surveyed approximately 80 kms of promoted (leafleted) walks in the borough. This includes the popular Rhymney Valley Ridgeway Walk, Machen Forge Trail, Rhymney Riverside and the Escape to... series.
- Installation of access furniture, this includes 5x Kissing gates, 10 stiles and a flight of steps, these works have been carried out countywide.

Greener Caerphilly Report

In 2012 research and data collection was undertaken, resulting in the production of a “State of the Environment in Caerphilly” report, which was published in July 2012. The report was based on 10 key environmental indicators including street cleanliness, waste management, fly tipping and water quality.

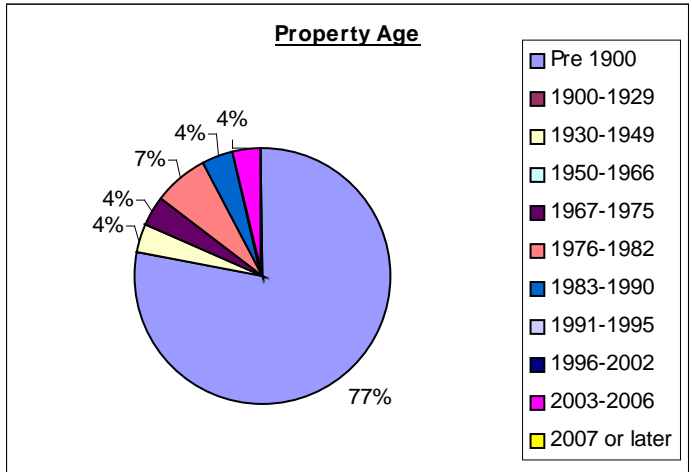
As part of its reporting processes a dashboard has been established in the Authority’s Ffynnon performance reporting system. This dashboard incorporates key environmental indicators and includes a reporting mechanism for progress on agreed actions. The dashboard is structured to reflect the 3 Greener Caerphilly priorities

Consultation

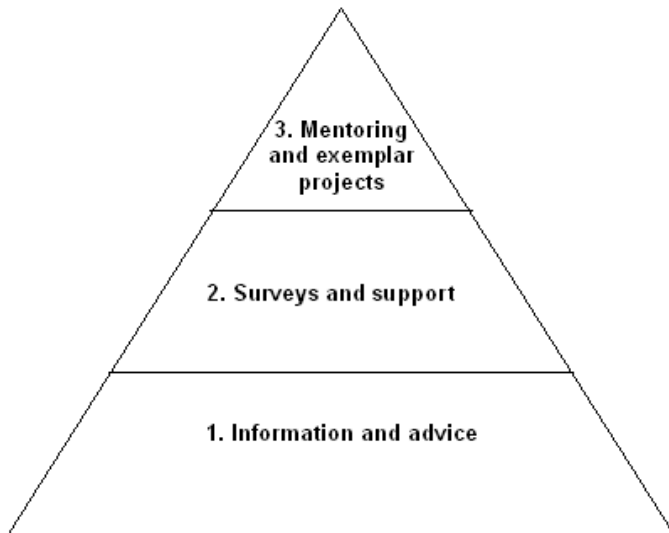
During the development of the project, detailed research was undertaken to identify the key issues for the county borough. A database of farms in eligible wards was identified, and a consultation exercise was carried out. The results showed that the majority of farmers reside in pre-1900 hard-to-treat 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 such as 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.

Oldest Fridge freezer Competition

Fuel and energy prices are continuing to rise and in a consultation with local farmers in 2011 it came out as a top concern. 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, in 2012 the RDP Sustainable Energy 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 (see Level 3 section for up to date information).

Although not all of the participants saw a decrease in their electricity consumption (mainly due to a period of cold weather, which saw them use expensive electric heaters for several hours each day) it was deemed a success as habits changed and some participants even upgraded their old appliances to more energy efficient versions. One farm household was so shocked by how much electricity their old freezer was using they decided to buy a new much more energy efficient version.

The RDP Sustainable Energy Team picked up on the fact that these fridge/freezers are switched on for 24 hours; seven days a week and many households have fridge/freezers approximately 20-30 years old. AMDEA (Association of Manufacturers of Domestic Appliances) reported that modern fridge freezers are very energy efficient compared to their predecessors, with the average energy consumption dropping from 480 kWh per year in 2000 to just 327 kWh in 2010, a reduction of nearly a third. This has mainly been achieved through improved insulation and more efficient pumps and seals.

The aim of the competition was to encourage people to upgrade their old inefficient fridge/freezers to more efficient versions that save not only energy but also money.

A competition was run from the beginning of September 2013 – 31st October 2013 to:

- find the oldest fridge/freezer in Caerphilly County Borough
- make people aware of the energy consumption of old inefficient refrigeration appliances and to
- encourage them to upgrade to more efficient versions.

To verify the age of the winning appliance proof of purchase or the serial/product number was required. In total 121 residents entered the competition with the prize being a brand new energy efficient A++ fridge/freezer (valued between £599-£699). The details of the oldest appliances were sent through to Electrolux who supplied the prize to adjudicate the winner. The winning appliance was a G.E.C. fridge (with a small freezer compartment) from the 1950's.

Press coverage for the fridge freezer competition winner has included the Campaign, and the Caerphilly Observer. It has also featured on CCBC's website and Rural Caerphilly's Facebook page.

Events 2013/14

The RDP Team were engaged in an entire calendar of events promoting the programme and services it offers. The main events of the year were the Maes Yr Onn Farmhouse launch, Bedwellty Agricultural Show, the Machen Agricultural Show, The Nelson Ewe Sales, Farming Connect event at Maes Yr Onn Farm and the RDP Big Pop-Up in New Tredegar.

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 2013/14 a total of three 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.

Links to other support

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

Caerphilly Agri Network

The RDP Sustainable Energy team are involved with the Agri Network that has been set up by the RDP team, assisting in coordinating the meetings. 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.

A total of 22 members of the local agriculture industry attended the last meeting held in February 2014, at Penallta Rugby Club. Speakers included Glyn Davies of 'Farmers Union Wales' who provided an update on the recent CAP reform. Deian Thomas of 'Farming Connect' provided an update on the help available through the Farming Connect service and Allan Mills 'Farm Watch Coordinator Gwent Police' spoke on how to reduce farm based crime.

Outcome of the evening included interest in the dry stone walling and hedge laying training and an expression for the RDP Officers to produce a Rural Directory that will help promote local services to the farming community.

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

In May 2011 the Davies family gained planning permission to construct a farmhouse on the former site at Maes Yr Onn Farm, Manmoel, which burnt down in 1976. Maes Yr Onn has existed as a separate farm since prior to 1825. The farm comprises 84 Ha and has been farmed on a commercial basis by the Davies family for over 30 years. Arthur Davies continued to farm the

land, but was forced to travel to the site from a terraced house in a village approximately 5 miles away over poor mountain roads to feed and tend to the stock and to carry out farm maintenance. During winter months, the farm occasionally became inaccessible due to snow and ice, which raised concerns relating to the welfare of the animals. The construction of a two-story farmhouse onsite would enable further expansion of the business and ensure effective day-to-day management of the farm and stock.

Due to the remote location of the farm it is completely off grid, with no access to mains electricity, gas, water or sewerage services. This provided the owners with difficult challenges integrating and balancing energy production and use within the property and ensuring compliance with all appropriate regulations including Planning, Building Regulations and the Code for Sustainable Homes Level 3.

In late 2011 Caerphilly County Borough Council's RDP Sustainable Energy Team stepped in by putting together a partnership with the Davies family, Building Research Establishment (BRE) and SSE to design and deliver a modern farmhouse and family home that reflects the stunning location, and resolves the challenges of an off grid location.

BRE were first commissioned to carry out a feasibility study of the building, taking in to account occupation, usage and power requirements. The starting point was to analyse the energy and water usage patterns of the family in their terraced property and to establish their likely consumption (demand) in the new building, based on energy modelling data. All building design work was also undertaken by Andrew Sutton, Associate Director BRE South West & President, Royal Society of Architects in Wales. With the design of the farmhouse being based on the traditional Welsh Longhouse, but has been updated to provide a comfortable family home. A major requirement for the property was to minimise heat loss from every part of the building fabric. The envelope of the building has been designed as a super-insulated home so it should achieve low U-Values, which would demonstrate minimal heat loss. The key elements of the proposal including;

Heating

Heating and hot water to the house is provided by a 20kW biomass boiler to meet the family requirements. Due to the rural location of the property the boiler is fed from the family's own woodland on site creating a self-sufficient supply of fuel. Logs are cut into 600mm lengths and then quartered to provide maximum surface area for burning and thus maximising the efficiency of the boiler. The biomass boiler is complimented by a thermal store. Heat within the building is distributed using the "thermaskirt" system, a new innovative product which, uses the skirting board to distribute heat rather than radiators.

Electricity

The main electricity generation is from a 3.9kW solar photovoltaic array installed on the south facing roof pitch 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

As Maes yr Onn is an off grid residence set in a remote location, getting water to the property is not possible with conventional pipe work. To overcome this, rainwater-harvesting technology for

domestic use has been installed which includes potable water for drinking. Rainwater is collected from the roof of the house and stored in a 5500 litre tank located in the basement plant room. Water is filtered for particles to 5 microns and treated with UV light to sterilize bacteria, and then pumped around the house to feed the two bathrooms, the kitchen sink and the utility area.

SSE's Contracting division who provide mechanical and electrical contracting services, installed all the power, heating and water supply technologies.

Living off grid means that the family needs to be constantly aware of their consumption to ensure that there is not a wasteful use of lights and appliances. Limiting the use of electrical appliances and increasing manual work is a difficult balance to achieve. A change in lifestyle is inevitable in order to ensure effective transition from "grid" to "off grid" living. The family will need to live on approximately 50% of the energy that they used in their previous, similar 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.

By working with SSE, the Partnership has provided 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.

A dedicated flickr gallery is just one of the communication methods the Partnership are using to promote the project. There have also 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.

www.flickr.com/photos/caerphillycbc/sets/72157632823808866

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 took place on 6th June 2013 by Alan Davies AM, Minister for Natural Resources and Food.

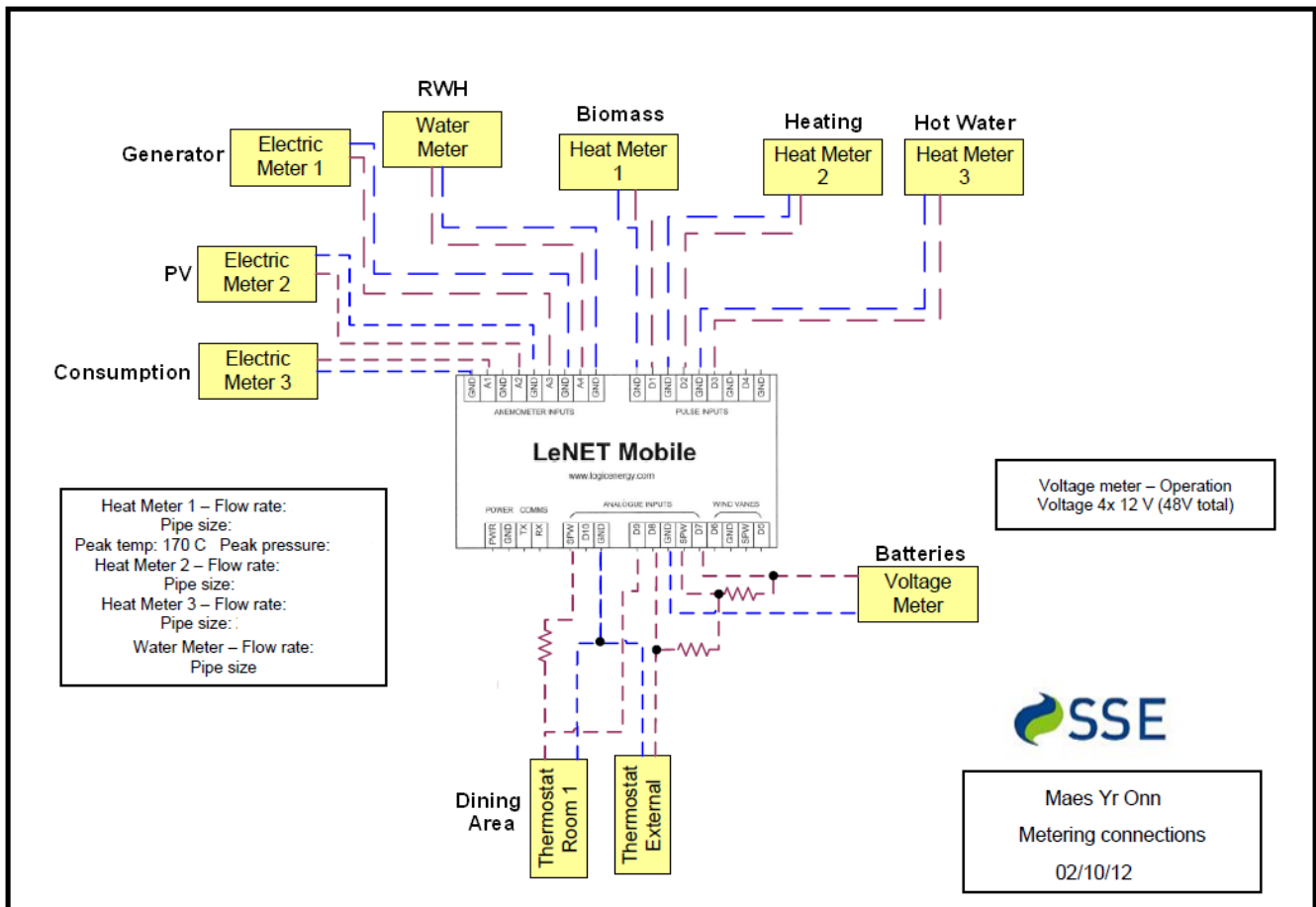
In November 2013 the project won the Royal Town Planning Institute Wales Planning Award.

Metering & Monitoring

The entirely off grid site requires innovative solutions that are applicable to the rural location, the resource 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 Constructing Excellence Wales and 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: RDP Farmhouse Energy Challenge

The Government is currently implementing a programme where every home and business in Britain will receive a smart meter and an in-home energy display. These technologies will help you to keep track of the energy (gas and electricity) you use in your home or business and cut out the need for meter reading. The Energy Saving Trust states that:

‘the government recognises that consumers cannot take informed action to reduce their domestic energy consumption (and therefore their bills and their carbon dioxide emissions) unless they have accurate and timely information.’

By having these installed, according to some estimates, households could see a reduction of between 5 and 15% on their electricity usage.

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. 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 and in March 2013 these were sent a form promoting the help available from the RDP Team. One of the options farmers could indicate interest in was the Farmhouse Energy Challenge. This originally took place in 2012 but due to interest from farmers another challenge was scheduled in 2013. The farms that indicated interest in the challenge were sent a pack, which included a letter, flyer, a 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.

Five farms decided to participate in the challenge, each receiving a monitoring diary in which to make a list of all major electrical appliances in the home, energy rating and approximate age (if known). 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.

Daily readings were again recorded in weeks three and four and the completed diaries were then analysed to see how successful our farm householders had been in reducing their electricity consumption and hopefully saving money.

By having the energy displays participants were able to learn about the difference in power consumption of different appliances and relate this into costings. Nearly all the participants were shocked as to how much electricity appliances, particularly those that produce heat such as the kettle, used. It motivated participants to make changes from the smallest change of turning off the lights when leaving a room to researching for energy efficient models of appliances to upgrade to. At the end of the challenge it was noted that some participants even began to know their typical daily consumption. Residents also noted the amount of energy that is consumed by leaving appliances on standby. The Energy Saving Trust state that on average UK households spend between £45-£80 a year each powering appliances left in standby mode or not in use!

Out of the five participants of the RDP Farmhouse Energy Challenge, a total of three households actually managed to reduce their electricity use within the short timeframe. Of the three who achieved a reduction, only one did not achieve a reduction in the estimated range of 5-15%.

Project 4: Climate Change Adaptation

Implications for Farms and Rural Businesses in Caerphilly

As a result of a wider Climate Change Adaptation Project being delivered by 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.

In 2012 Dr Alan Netherwood completed a desktop study regarding climate change implication for Caerphilly county borough. There was also an engagement with local farms/businesses to gather

a local narrative of the changing climate and current impacts on agriculture. Following this a workshop was carried out, feeding back the evidence and recommendations. The main conclusion was that there are major knowledge gaps that need addressing to enable adaptation planning and that appropriate information provision for farmers and rural businesses in Caerphilly is required. It was therefore decided to develop a set of factsheets on crops, livestock, soils, water, biodiversity and trees to provide information summaries and to also complete a pilot project that will be site specific containing more information.

The team then contacted two different farms to take part in the pilot project, the aim of which was to develop the methodology for producing climate adaptation reports to enable farmers to begin to understand the likely impacts that climate change will have on their business and with the advice begin to put in place measures that will enable them to adapt to the changes and to make their business more resilient in the future.

Blaengawney is a cider farm and Ty Oakley is an organic livestock farm. Site visits took place to gain information on livestock, crops, soils, water, trees, biodiversity/wildlife, and any key issues that the owners had. A tour of the farms were also completed to gain a detailed picture of the farm topography, hydrology, land management and processes used on site. Once the site visit was complete, research was then undertaken in the office and all information compiled into a report specific to each location with recommendations in the conclusion for potential measures to be carried out. Each report looked at how each site will be affected in regards e.g. livestock production, trees, soils, water/hydrology, biodiversity, crop production and business resilience by a changing climate and how each farm/business can adapt. As well as providing recommendations they also included potential funding/grant support that each farm/business could access.

Following completion of the Climate Change Adaptation reports for Ty Oakley and Blaengawney, site visits were arranged for each location to feedback the challenges and risks that each may face in the future due to climate change and also provide information on adaptation methods for each. Outcomes of the visits include assisting Ty Oakley with a diversification idea into organic pet hay and also providing information on renewable energy technologies.

As a side project the RDP Officers worked with the CCBC Ecology team to help them apply for funding for a 'Pollinators Project' through the Living Environment Partnership (Caerphilly Environment Quality (CEQ) Group Grant 2013-14 Round). Funding of £1,800 was awarded towards the project which aims to raise awareness of the importance of insect pollinators in Caerphilly County Borough and the benefits they provide to the natural environment and to the local farming and horticultural economy. The RDP Sustainable Energy Officers promoted the pollinator project during the two site visits to Blaengawney and Ty Oakley and both businesses indicated interest.

Visits were thus organised with the Ecology team to look at suitable sites at both locations.

Monitoring and measuring progress

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

- The Regeneration & Planning Division's Service Improvement Plan.
- The Local Service Board Single Integrated Plan

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 prepares report to the Greener Caerphilly Leadership Group and partners.

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 Actual	2013/14 Target	2013/14 Actual
Number of Services supported	4	5	5	7	5	7	5
The number of staff on the 'Cycle to Work Scheme'	New PI	New PI	104	221	291	320	360
The percentage of schools with a Green Flag award under the Eco Schools programme	32%	39.5%	51.6%	58%	62%	65%	67%
The number of education for sustainable development training with schools	New PI	New PI	128	102	89	90	89
Number of staff on our "Car share database"	New PI	New PI	293	321	342	350	354
Number of sustainable travel events held	New PI	New PI	10	13	11	12	9
Number of Climate Change Woodlands created	New PI	New PI	1	3	3	3	5
Farms and rural businesses advised on sustainable energy issues	New PI	New PI	New PI	28	28	30	37

Funding

The Sustainable Development & Living Environment Team **secured an additional £157,770 to contribute to our work in 2013/14**. This includes:

- **£71,000** from UWHA for Solar Schools phase II
- **£20,000** for Caerphilly Environmental Quality projects from the Community Scheme budget
- **£34,500** from Living Environment Partners to match fund CEQ projects
- **£5,800** for Climate Change Woodlands projects from the Community Scheme budget
- **£10,000** for Environmental Volunteers projects from the Community Scheme budget
- **£2,180** from Lets Walk Cymru towards the Pedometer Challenge
- **£3,750** from Sewta for Cycle Training
- **£400** from Fairtrade Wales towards Fairtrade school training
- **£10,140** from Natural Resources Wales towards Community Strategy delivery

£157,770 Total secured

Sustainable Development and Living Environment Team

The Sustainable Development and Living Environment Team is part 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 with the Authority. This includes raising awareness of living environment and sustainability issues and ensuring that the principles are embedded in the policies and procedures of the Authority.

Tracy Evans: Education for Sustainable Development Officer.

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

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

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 13 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.