

On the Trail

of a greener brighter future

A teacher's guide to Swansea Sustainability Trail



The resources that our planet can supply are limited and at the moment the demands that we are making on them are far greater than nature can sustain. Climate change is a growing reminder of that. The projects on the Swansea Sustainability Trail demonstrate how we can better protect our environment, while at the same time providing for our social needs and economic prosperity. When this balance can be found we can truly say we are living more sustainably.

The projects featured on the Trail include enlightening and practical examples of the kinds of steps that we as individuals and communities need to take to build more sustainable lifestyles and improved quality of life for everyone.

We are proud to be the first in Wales and amongst the first in the UK to develop a resource such as the Trail. We hope that the experiences you and your school community gain from this will be fun and informative and will inspire you to take action for a sustainable future.

Steve Brown Chairman of Swansea Environmental Forum (SEF)



Education for Sustainable Development and Global Citizenship (ESDGC) has been recognised by education and government bodies across Wales as an essential part of teaching and management in schools.

At the same time, there is a strong push towards greater use of the outdoors for learning and personal development. The Swansea Sustainability Trail opens up a wide range of opportunities for teachers to address both of these important aspects of education, providing pupils with first-hand experiences that can make sustainability issues more tangible, real and relevant.

This easy-to-use guide offers teachers an excellent resource which can help them access practical demonstrations of the key concepts of ESDGC. It also complements other documents produced to support local teachers such as SEEFs Sustainable Development and Global Citizenship Guidance for Schools and Using Sites for Studying the Natural Environment in and around Swansea.

A national ESDGC strategy for action was launched in 2006 and it is anticipated that ESDGC will have a more prominent place in the revised curriculum for schools in Wales, due to be introduced in 2008/9. Swansea schools are well placed to be ahead of the game with access to a breadth of support and resources as yet unavailable in many other parts of the country.

Deb Hill Chairman of Swansea Environmental Educational Forum (SEEF)

The Sustainable Swansea Trail and this accompanying resource for teachers were created by Sustainable Swansea, an initiative of Swansea Environmental Forum, with support from the Big Lottery and the City and County of Swansea.

Sustainable Swansea aims to help Swansea become a more sustainable place to live, work and visit. Being sustainable means looking after the resources we have so that they are available for future generations to enjoy and utilise. The Trail showcases several places in Swansea that demonstrate how we can look after these resources and help us to understand why it is important. Sustainable Swansea coordinates several other projects including the Swansea Green Map and the Sustainable Swansea Awards.

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Disclaimer: While Swansea Environmental Forum and Sustainable Swansea welcome the contribution of the persons and organisations mentioned in this booklet, inclusion in the publication does not necessarily mean that Swansea Environmental Forum or Sustainable Swansea endorse their activities. Swansea Environmental Forum and Sustainable Swansea recognise that many other relevant organisations could have been included in the publication and wish to emphasise that omission from the booklet in no way implies that an organisation is not making a valuable and relevant contribution to sustainable development in Swansea. While every effort has been made to ensure that information in this booklet is correct, Swansea Environmental Forum and Sustainable Swansea cannot accept responsibility for any losses incurred by persons or organisations as a result of any inaccuracies herein.

For more information on these projects, visit www.sustainableswansea.net or contact the project staff:

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How to use this Guide



The Swansea Sustainability Trail consists of 23 inspiring projects in and around the City and County of Swansea which demonstrate good practice in addressing sustainability issues. The purpose of this guide is to introduce the Trail to teachers and provide practical suggestions for using it as a stimulus for learning about sustainable development and global citizenship.

The guide presents information on each Trail project, as illustrated here.

The left-hand pages provide contact details and an illustrated outline of each projects' key features.

The right-hand pages give information that will help teachers get the most out of each project site & use the project as a stimulus for classroom work.

A map in the centre of this guide shows the locations of all the sites.

A summary table of all the projects is given at the back of the guide enabling quick cross-referencing of projects and providing their contact information.

site visits

A brief outline is given of the practicalities of visiting each site. Be aware that this information can be liable to change. It is strongly recommended that teachers make contact with the project in advance of any visit and, if possible, arrange a pre-visit. For useful guidance on the Code of Good Practice and a checklist for school trips, refer to the local directory for outdoor education, produced by SEEF, entitled Using Sites for Studying the Natural Environment in and around Swansea.

Swansea Community Farm

contact: Lailij Roberts 01792 570384 lailij@swanseacommunityfarm.org.uk
www.swanseacommunityfarm.org.uk

A stimulating and educational facility offering a wide range of opportunities for all ages and abilities to learn more about food and farming, sustainability and biodiversity.

Swansea Community Farm is home to a variety of rare breed farm animals, including pigs, sheep, ducks and chickens. Habitats well-suited to the needs of native wildlife are being created through planting trees, shrubs, flowers and native hedgerows. A pond, built by the child and youth volunteers, provides a home to frogs, newts and a variety of aquatic insects and the apiary ensures there are plenty of bees to help pollinate local flowers. The compost demonstration area provides a valuable teaching resource, as well as a means of fertilising the vegetable plots.

The Community Farm has a very inclusive approach and seeks to involve a wide range of people through volunteering and training opportunities, activities for young people, children and those with disabilities, and by engaging the local community.

The purpose-designed buildings and grounds are accessible to all and have been built with environmentally-friendly features including solar panels, a wood burner, water saving devices and alternative building materials. A rainwater harvesting system is also being developed to collect rainwater from the building roofs for use in the toilets.

Beyond the main site is a small pocket of ancient coppiced woodland as well as Cadle Heath Local Nature Reserve, allowing habitat comparison studies.






sustainability themes

Sustainable Development is often defined as:

"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (Brundtland Report, 1987)

A simple table is provided for each project to identify some of the sustainability themes that are demonstrated.

The nine sustainability themes used in this guide reflect those in the booklet **On the Trail** of a greener brighter future which is a pocket guide to the Swansea Sustainability Trail. The themes are also similar to those used in the document **Sustainable Development and Global Citizenship: Guidance for Schools**, published by SEEF in 2006. This valuable resource contains practical examples of school activities linked to eleven themes and outlines the curriculum opportunities for ESDGC. Teachers will find both of these resources useful when planning work on sustainability and the Trail.

curriculum links

Suggested curriculum links for primary and secondary education are made to each project. There may be many other opportunities linked to each site particularly related to numeracy, literacy and PSE.

site visits
School groups of up to 30 by arrangement only and a fee is charged.

on-site facilities
Indoor and outdoor teaching areas, toilets, hand-washing facilities, accessible raised bed garden. Interpretation panels are planned for around site.

site access
Car park with limited space. Buses can stop in turning circle outside gate.
Tarmac paths around buildings and near poddocks provide easy access.
Other paths are packed gravel and though accessible, can be bumpy.

potential hazards
The Farm can provide risk assessments for the site and educational activities.
Key potential hazards include contact with soil, compost and animal-borne micro-organisms; animal contact with possibility of scratches and stings, and visitors are also advised to dress appropriately.

resources
paid materials ✓
teacher materials ✓
self-led activities on site ✓
self-on-site school ✓

sustainability themes demonstrated at this site
animal welfare ✓
biosecurity ✓
energy ✓
community ✓
food & diet ✓
building materials ✓
transport ✓
waste & recycling ✓
water ✓

ESDGC key concepts promoted at this site
interdependence ✓
citizenship & stewardship ✓
needs & rights ✓
diversity ✓
sustainable change ✓
quality of life ✓
values & perceptions ✓
conflict resolution ✓

educational activities
On-site:
• Explore our food production, farming and animal care
• Composting Activities (recycling, waste management and mini-beasts)
• Create a traffic computer
• Set-up a composting station in school
• Explore food chains and food waste
• Invite an RSPCA Education Officer to talk about caring for pets
School-based:
• Investigative Skills / Life Processes & Living Things (nutrition, growth, adaptations / Materials & Their Properties (grouping materials and changes / Physical Processes (electricity generation)
• Also aspects of PSE, HE, DT, Ge
• Investigative Skills / Life Processes & Living Things (nutrition, food chains, micro-organisms / Materials & Their Properties (physical change / Physical Processes (energy resources and conservation)
• Also aspects of PSE, DT

tandem visit suggestions
energy, building materials
waste & recycling
visit other trail sites
Environment Centre, Gwallo Projects
Bio-a-Ric, Play Resource Centre
15 Stop Car Wash, Gwyn Community School, TD.PIC, Home

resources

This box provides a quick reference to the resources and support available from the project. It is important to note that many of the projects on the Trail were not set-up for educational purposes and though they are willing to support school visits, they may not have trained education staff or support materials.

educational activities

Suggestions are made here for on-site and classroom based activities. On-site: Most projects can offer a guided tour and introductory talk. Some have experienced educational staff that can lead a variety of curriculum-linked activities. School-based: These activities could be used as a follow-up to a project visit or independently of a visit to explore sustainability themes.

ESDGC key concepts

Education for Sustainable Development and Global Citizenship (ESDGC) is about:

“The links between society, economy and environment and between our own lives and those of people throughout the world; the needs and rights of both our present and future generations; the relationships between power, resources and human rights; the local and global implications of everything we do and the actions that individuals and organisations can take in response to local and global issues.” (ACCAC, 2002)

There are nine key concepts of ESDGC which are explained below. The concepts that are best promoted for each project have been highlighted in a simple table on the project pages.

interdependence – understanding how people, the environment and the economy are inextricably linked at all levels from local to global

citizenship and stewardship – recognising the importance of taking individual responsibility and action to make the world a better place

needs and rights – understanding our own basic needs and about human rights and implications for the needs of future generations of actions taken today

diversity – understanding and valuing both human diversity - cultural, social and economic - and biodiversity

sustainable change – understanding that resources are finite and that this has implications for people's lifestyles and for commerce and industry

quality of life – acknowledging that global equity and justice are essential elements of sustainability and that basic needs must be met universally

uncertainty and precaution – acknowledging that there are a range of possible approaches to sustainability and global citizenship and that situations are constantly changing, indicating a need for flexibility and lifelong learning

values and perceptions – developing a critical evaluation of images of, and information about, the less and more economically developed parts of the world and an appreciation of the effect these have on people's attitudes and values

conflict resolution – understanding how conflicts are a barrier to development and a risk to us all and why there is a need for their resolution and the promotion of harmony (ACCAC, 2002)

tandem visits

Teachers may wish to visit more than one Trail site in a single trip in order to explore one or two specific themes or Trail in general. At the end of each project entry, suggestions are made for linking projects by theme and the next nearest sites to each project are also given.

Bishop's Wood Local Nature Reserve

contact: Karen Jones or Dai Morris 01792 361703 karen.jones@swansea.gov.uk
www.swansea.gov.uk/bishopswood

This reserve has won the prestigious Green Flag Award for its excellent standards in site management for wildlife conservation, education provision and community involvement.

Bishop's Wood is situated close to Caswell Bay and comprises a mixture of woodland and limestone grassland, which is relatively rare in Britain. It was designated a Local Nature Reserve in 1975 and is also a Site of Special Scientific Interest and Special Area of Conservation, in recognition of its local and national importance. Part of the wood is classified as ancient woodland which means it has been wooded since at least the seventeenth century. Interesting species on site include bluebells, wild garlic and herb Paris and historical features include boundary stones, a derelict chapel, an Anderson shelter and small limestone quarries.

The Roundhouse within the woods is also award-winning, in recognition of its imaginative design and use of local materials and skills. It is made from green hardwoods harvested from Gower woodlands in accordance with sustainability principles, and the structure was inspired by a study of a medieval cathedral spire.

The Bishop's Wood Countryside Centre staff offer day visits to both the woodland and nearby seashore. These are mainly for primary-aged children but secondary pupils and college students can also be catered for. Sessions usually last 4-6 hours and involve comparing habitats, environmental games and artwork, and can be linked to various curriculum areas including maths, art, geography, science, English and history. There is a range of resources and equipment available for use by visiting groups, including nets, buckets, bug pots, books, clinometers, measuring tapes and clipboards. Forest School SNPT is also based in the Countryside Centre and uses this site for educational activities.



site visits

School groups are welcome, by arrangement. Activities led by the site wardens are free of charge. A fee is charged for activities led by Forest School SNPT.

on-site facilities

Roundhouse within the woodland can accommodate up to 50 children. Large public car park and toilets by Caswell Bay. Interpretative board and a leaflet with site map.

site access

The car park by the beach provides a suitable drop-off and pick-up point, and there is additional parking at the nearby Countryside Centre. There is wheelchair access to the Roundhouse and beech tree glade but other footpaths are narrow and can be slippery when wet. There are steep steps on either side of the valley.

potential hazards

A risk assessment is available but main potential hazards include branches coming down in stormy weather, steep slopes (which can be avoided) and slippery paths.

curriculum links

Primary

- Sc:** Investigative Skills / Life Processes and Living Things (variation, adaptation, food chains)
- Ge:** Geographical Skills (maps and plans), Environmental Change
- Art:** Using a Range of Starting Points (natural objects and environments) / Using a Range of Materials and Processes
- En:** Writing (imagine and explore feelings and ideas)
Also aspects of PSE, DT, RE

Secondary

- Sc:** Investigative Skills / Life Processes and Living Things (variation, food chains, classification, environmental protection)
- Ge:** Environmental Change (ecosystems, environmental issues)
Also aspects of PSE, DT

resources

pupil materials	✓	staff-led activities on site
teacher materials	✓	staff can visit school

sustainability themes demonstrated at this site

- animal welfare
- biodiversity ✓
- energy
- community
- food & diet
- building materials ✓
- transport
- waste & recycling
- water

ESDGC key concepts promoted at this site

- interdependence ✓
- citizenship & stewardship ✓
- needs & rights
- diversity ✓
- sustainable change ✓
- quality of life
- uncertainty & precaution
- values & perceptions
- conflict resolution

educational activities

on-site

- Guided walks (includes the Roundhouse and looking at site management)
- Ecology work – habitat comparison and adaptation (with beach), using keys
- Environmental games, environmental art and storytelling
- Woodland craft and management activities (small groups only)
- Treasure hunts and map reading activities

school-based

- Creative writing and sensory poems based on the natural environment
- Creating shelters and designing structures using natural materials
- School grounds developments – trails, tree planting, willow sculptures

tandem visit suggestions

biodiversity	Gower Commons Initiative, Crymlyn Bog National Nature Reserve
building materials	Environment Centre, Swansea Community Farm
nearest other trail sites	Mumbles Development Trust, Red Café, Gower Heritage Centre

Blackpill Wildlife Centre

contact: Colin Jones 01269 822876 colin.jones02@ntlworld.com
www.rspb.org.uk www.rspb.org.uk/youth/learn

A great example of partnership between voluntary groups and the council, taking advantage of an under-used building to sensitively observe birdlife on a protected stretch of beach.

Blackpill Wildlife Centre is situated in the Blackpill Lido lifeguard hut, 2 miles west of Swansea on the road to Mumbles. The building is owned by the City and County of Swansea but since 2001 has been run as a Wildlife Centre in the winter months by volunteers from the RSPB and the Gower Ornithological Society.

The Centre is open from October to Easter and is full of information about wildlife, especially the birds that can be seen during the winter months, when Swansea Bay becomes the feeding haven for vast numbers of wildfowl, waders and gulls. More than 150 different species have been noted in the area, of which 60 are rare and 41 are scarce breeds. There are spectacular views across Swansea Bay to the Marina and docks, including the SA1 Wind Turbine and a wind farm on the hill behind. The lifeguard hut also features an outdoor solar powered shower, so the theme of renewable energy can be explored here. The Centre is just off the Foreshore Cycle Path.



site visits

School groups must be accompanied by a teacher, and a maximum of 10 pupils can use the Centre at a time (though others can use the beach or adjacent play area).

Entry is free but pre-booking is essential. Best to visit 2 hours either side of high tide.

on-site facilities

Indoor viewing area with interpretation panels, binoculars and identification guides are available to help with bird identification. Public toilets nearby. The volunteers can provide bilingual RSPB pupil and teacher materials free of charge.

site access

Bus stop nearby for drop-off. The Centre is easily accessible by cycle or walking on Foreshore Cycle Path. No wheelchair access to Centre.

potential hazards

Drop-off point and toilets near busy road, Centre adjacent to cycle path, suitable clothing should be worn for outdoor bird-watching and activities.

curriculum links

Primary

Sc: Life Processes and Living Things (adaptation, variation, feeding) / Physical Processes (electricity generation)

Also aspects of PSE, RE, Ge

Secondary

Sc: Life Processes and Living Things (variation, classification, food chains, competition, conservation) / Physical Processes (energy resources and conservation)

Also aspects of PSE, Ge

resources

pupil materials	✓	staff-led activities on site	✓
teacher materials	✓	staff can visit school	

sustainability themes demonstrated at this site

animal welfare	
biodiversity	✓
energy	✓
community	
food & diet	
building materials	
transport	
waste & recycling	
water	✓

ESDGC key concepts promoted at this site

interdependence	
citizenship & stewardship	✓
needs & rights	
diversity	✓
sustainable change	✓
quality of life	
uncertainty & precaution	
values & perceptions	
conflict resolution	

educational activities

on-site

- Short talk and introduction to Centre
- Bird observation using identification and classification keys
- In-house quiz sheet (based on talk and display)

school-based

Try RSPB's web-based activities and downloadable materials linked to birds (adaptation, feeding, migration, etc.) and wider environmental issues, including:

- Making bird cake and bird feeders
- Observing birds in the school grounds
- Exploring food chains, habitats and adaptation
- Studying air pollution, ozone depletion and climate change

tandem visit suggestions

energy	Environment Centre, Wind Turbine (Docks)
biodiversity, water	WWT National Wetland Centre Wales, Crymlyn Bog National Nature Reserve
nearest other trail sites	Mumbles Development Trust, Red Café, Sustrans (Foreshore Cycle Path)

Crymlyn Bog National Nature Reserve

contact: Jane Richmond 01792 480200 jane@environmentcentre.org.uk
www.environmentcentre.org.uk www.ccw.gov.uk

A nature reserve of national and international importance for biodiversity and wetland habitats which demonstrates the changing interaction between man and the natural world.

Crymlyn Bog NNR is primarily made up of lowland fen with areas of wet woodland, and features a range of interesting species including Britain's largest spider, the fen raft spider. The reserve is managed by the Countryside Council for Wales but educational activities are run at the site by staff from the Environment Centre.

The site is situated adjacent to Swansea's main landfill site and has a long history of human interaction with, and impact, on nature through mining, farming and conservation. A circular nature trail starts and ends at the visitor centre and offers good views of the wetland habitat and a variety of wildlife, which includes birds, dragonflies and specialised plants. The nature trail pond, developed from a section of disused canal, is an interesting area of open water habitat, providing a good location for supervised pond dipping. The bog itself is largely inaccessible and potentially dangerous. The nature trail passes through fields which have the remains of WW2 barrage balloon anchors. Displays within the visitor centre provide information about wetland wildlife and management, and the site's interesting and eventful history.



site visits

School groups of up to 30 by arrangement only. Fees charged for led activities.

on-site facilities

Indoor teaching area, circular nature trail (1km), toilets, interpretation displays and site information.

site access

There is a car park but large buses are unable to access the site safely due to a very narrow approach road; small coaches or minibuses should be used. Wheelchair access to the centre is possible but not around the site. The trail can get muddy.

potential hazards

A site risk assessment has been prepared by the Countryside Council for Wales. The main hazard is the treacherous ground conditions on the bog itself, with areas of wet peat and floating vegetation over deep water. Adequate supervision and precautions are essential during any activities involving the nature trail pond. Contact should be avoided with the horses on site (part of the management of the reserve).

curriculum links

Primary

Sc: Investigative Skills / Life Processes and Living Things (variation, adaptation, food chains)

Ge: Water / Environmental Change

Hi: Local History / British History / way of life in the past / past events

Also aspects of PSE, RE

Secondary

Sc: Investigative Skills / Life Processes and Living Things (variation, food chains, classification, environmental protection)

Ge: Environmental Change (ecosystems, environmental issues)

Also aspects of PSE, Hi

resources

pupil materials	✓	staff-led activities on site	✓
teacher materials	✓	staff can visit school	

sustainability themes demonstrated at this site

animal welfare	
biodiversity	✓
energy	
community	
food & diet	
building materials	
transport	
waste & recycling	
water	✓

ESDGC key concepts promoted at this site

interdependence	✓
citizenship & stewardship	✓
needs & rights	
diversity	✓
sustainable change	
quality of life	
uncertainty & precaution	✓
values & perceptions	
conflict resolution	

educational activities

on-site

- Nature trail (exploring the natural and human history of the site)
- Ecology work - using keys, food webs, adaptation, competition, key words
- Pond dipping

school-based

- Food chain and food web mobiles
- School grounds developments – creating a bog garden or pond
- Research change in local land use – mining, canals, woodland management

tandem visit suggestions

biodiversity	Gower Commons Initiative, WWT National Wetland Centre Wales
water	Pitstop Car Wash, Blackpill Wildlife Centre
nearest other trail sites	Wind Turbine (Docks), Environment Centre, Play Resource Centre

Environment Centre

contact: Jane Richmond 01792 480200 jane@environmentcentre.org.uk
www.environmentcentre.org.uk

A unique facility that brings together many local groups and projects to provide a focus and one-stop shop for environmental information, education and activity in Swansea.

The Environment Centre is housed in a restored Edwardian telephone exchange in Swansea's historic Maritime Quarter and was opened in 1995 by HRH The Prince of Wales. Several organisations and projects are based in the Centre and many others use its facilities for meetings and events. The Centre has a small café serving fair trade tea and coffee, which can also be purchased in the Centre's Green Shop along with other ethical, organic, energy-saving and recycled products.

The building, particularly the recently built Eco-annexe, has a number of interesting features that demonstrate the use of recycled materials, renewable energy and energy efficiency. There is a small but attractive organic garden with raised beds, ponds and a composting area. The Centre also provides information on all aspects of sustainability and ESDGC and offers a wide range of educational activities and teacher support. Exhibitions are held on various environmental themes from time to time, which support and enhance educational visits and programmes.

Sustainable Swansea and Swansea Environmental Education Forum are both based at the Environment Centre.



site visits

School groups of up to 30 by arrangement only. Fees charged for some activities.

on-site facilities

Indoor teaching areas, small organic garden with ponds, toilets, interpretation panels, small shop and café.

site access

Car parking nearby. Buses drop-off on Adelaide Street outside Evening Post building. Wheelchair access within building.

potential hazards

The Centre can provide risk assessments for the site and its educational activities.

curriculum links

Primary

Sc: Materials and Their Properties (grouping materials and change) / Physical Processes (electricity generation)

Also aspects of PSE, Ge

Secondary

Sc: Materials and Their Properties (physical change) / Physical Processes (energy resources and conservation)

Also aspects of PSE, Ge

resources

pupil materials	✓	staff-led activities on site	✓
teacher materials	✓	staff can visit school	✓

sustainability themes demonstrated at this site

animal welfare	
biodiversity	
energy	✓
community	
food & diet	✓
building materials	✓
transport	
waste & recycling	✓
water	

ESDGC key concepts promoted at this site

interdependence	✓
citizenship & stewardship	✓
needs & rights	✓
diversity	✓
sustainable change	✓
quality of life	✓
uncertainty & precaution	✓
values & perceptions	✓
conflict resolution	✓

educational activities

on-site

- Environment Centre Tour highlighting key features
- Interactive Talk on Waste & Recycling and/or Energy
- Sustainable Living Exhibition (Jan-Feb) plus talk
- Waste or Energy Exhibition (Sep-Oct) plus talk

school-based

- Undertake an energy or waste audit of the school
- Explore the ecological footprints of pupils and the whole school
- Creative writing, art or drama based on Dinosaurs and All That Rubbish

The Centre coordinates the Swansea Schools Recycling Scheme and the Energy and Water Scheme and its education staff can assist with waste and energy audits and offer school-based talks and workshops on waste, energy and school grounds development. The Centre also offers several 'green boxes' on themes such as energy, biodiversity and waste & recycling, each containing a range of educational resources, loaned to schools on a half-termly basis.

tandem visit suggestions

energy, building materials	Swansea Community Farm, Gwalia Projects
waste & recycling	Res-a-Rec, Play Resource Centre
nearest other trail sites	Wind Turbine (Docks), Sustrans, Oxfam Shops

Gors Community School

contact: Marion Jones 01792 522202
www.gorscommunityschool.uk.org

The first school in Swansea to gain the prestigious Eco-Schools Green Flag and winner of several other awards for environmental education, sustainability and global citizenship.

Gors Primary School has not only achieved the highest award in the Eco-Schools programme but is one of only a handful of schools in Wales to do so on three occasions, retaining the accolade for its continued commitment and high standards. Sustainability has been integrated into school life both in and out of the classroom, pupils have formed a Sustainability Task Force to investigate environmental practices in school and local businesses, and the school managers have brought in practical measures to save energy and water.

The Eco-Schools programme provides a simple framework for schools to assess the impacts they have on the environment and to work towards becoming more sustainable. It offers a focus for promoting environmental awareness across the curriculum, influencing the management of the school and involving the wider school community through a series of topics including energy, transport, school grounds, healthy living and global citizenship.

Gors Community School is a multicultural establishment with 9 different languages spoken by pupils, in addition to English and Welsh, and representation from over a dozen countries from around the globe. A high priority is placed on developing an understanding and respect for other faiths and cultures and the school has established links with other schools across Europe and further afield. A partnership with a school in Rajasthan has inspired practical action towards water conservation in Gors Community School e.g. putting Hippos into the toilet cisterns to reduce the amount of water used in flushing, and collecting rainwater in a butt for the school garden. The school has won a British Council award for its excellent work on global citizenship.



site visits

Teachers and groups of pupils are welcome to visit the school, or staff and pupils of Gors Community School may be able to visit other schools to share experiences and ideas. This may be particularly useful for Eco-committees and school councils.

on-site facilities

The site has typical school facilities with additional environmental features and gardening areas.

site access

The school is generally accessible though there are steps in some places. There is limited parking on site.

potential hazards

There are no special hazards at the site.

curriculum links

Primary

PSE: Community, Moral and Environmental Aspects
Ge: Environmental Issues (managing the environment sustainably, water) / Understanding of Places (a country less economically developed)

En: Speaking & Listening (group discussion & interaction)

Also aspects of Re, Sc, Ma

Secondary

PSE: Community, Moral and Environmental Aspects
Ge: Economic Activity and its Impact / Environmental Change (environmental issues, resource issues, sustainable development) / Understanding of Places (interdependence, study of two countries)

En: Speaking & Listening (group discussion & interaction)

Also aspects of Re, Sc, Ma

resources

pupil materials	staff-led activities on site	✓
teacher materials	staff can visit school	✓

sustainability themes demonstrated at this site

- animal welfare
- biodiversity
- energy
- community
- food & diet ✓
- building materials
- transport
- waste & recycling
- water ✓

ESDGC key concepts promoted at this site

- interdependence ✓
- citizenship & stewardship ✓
- needs & rights ✓
- diversity ✓
- sustainable change
- quality of life ✓
- uncertainty & precaution
- values & perceptions ✓
- conflict resolution

educational activities

on-site

- Tour of school and presentation of displays, features and projects linked to sustainability and global citizenship
- Meet the Eco-committee or Sustainability Task Force to discuss Eco-Schools and other initiatives

school-based

- Initiate or progress the Eco-Schools programme in school. Visit the website www.eco-schoolswales.org for more information and ideas.
- Establish links with a school or community in another country. Information on several schemes is provided on the British Council website (www.britishcouncil.org/learning-ie-school-partnerships.htm).
- Find out more about water conservation and water use at home (www.water-guide.org.uk) and in developing countries (www.wateraid.org.uk).

tandem visit suggestions

community	Red Café, Swansea Community Farm
water	Pitstop Car Wash, WWT National Wetland Centre
nearest other trail sites	T.O.P.I.C. House, Pitstop Car Wash, Singleton Botanical Gardens

Gower Commons Initiative

contact: Siôn Brackenbury 01792 391670 sion.brackenbury@swansea.gov.uk

A wonderful example of how economic, social and environmental considerations can be balanced through partnership, ensuring the sustainable future of the Gower Commons.

The Gower Commons include lowland heath which supports rare species such as skylark, chough, black bog ant and southern damselfly. The Commons also form a major part of the local rural economy, being used for grazing sheep, ponies and cattle by local commoners. Visitors are attracted to the area by the opportunities for walking, cycling and horse riding in the open landscape. The heathlands also give an historical context to the landscape, providing evidence of land use dating back as far as prehistoric times.

By working in partnership with those who have differing interests in the land, the Gower Commons Initiative has found ways to reverse the decline of internationally important wildlife habitats whilst providing opportunities for learning and leisure, and helping commoners and landowners to continue grazing their animals.

During the summer the Commons become covered with a dense blanket of bracken and if they were not grazed and actively managed, they would gradually become covered by scrub and trees leading to a reduction in their value for wildlife, recreation and agriculture. One key management technique used by the initiative is rolling the bracken to bruise and weaken it so that it becomes less dense and shorter, bringing benefits to livestock, walkers and wildlife alike. Other management methods include gorse and scrub clearance and the control of other invasive species.



site visits

The initiative is developing trails and associated educational resources to support site-specific field trips that schools can self-lead. These are being piloted with schools in 2007.

on-site facilities

Facilities vary according to site, but generally there are none. An arrangement has been made with a local farm for groups visiting Ryer's Down to access toilets.

site access

This varies but many sites are in open countryside and parking is generally not permitted on the commons without special permission. A farmer near Ryer's Down allows parking for coaches transporting school groups.

potential hazards

The Gower Commons Initiative can provide risk assessments for site visits and activities. The main potential hazards are typical of such open countryside areas and include slips, trips and falls, grazing animals and wildlife (ticks and adders), and Weils disease, if working with water.

resources

pupil materials	✓	staff-led activities on site	✓
teacher materials	✓	staff can visit school	✓

sustainability themes demonstrated at this site

animal welfare	
biodiversity	✓
energy	
community	
food & diet	✓
building materials	
transport	
waste & recycling	
water	

ESDGC key concepts promoted at this site

interdependence	✓
citizenship & stewardship	✓
needs & rights	
diversity	✓
sustainable change	
quality of life	
uncertainty & precaution	
values & perceptions	
conflict resolution	

curriculum links

Primary

- Sc:** Investigative Skills / Life Processes and Living Things (variation, adaptation, food chains, protecting the environment)
Ge: Enquiry & Skills (fieldwork & secondary evidence) / Environmental Change / Managing the Environment
Hi: Local History Study / Change (ways of life at different times)
Ma: Number / Handling Data (problem solving; processing, representing & interpreting data)
Also aspects of PSE, RE

Secondary

- Sc:** Investigative Skills / Life Processes and Living Things (variation, food chains, classification, sustainable development)
Ge: Enquiry & Skills (maps, photos, statistical information, values & attitudes) / Environmental Change & Sustainability (environmental issues, ecosystems, economic activity, resource issues)
Ma: Number & Algebra / Handling Data (collecting, processing & representing data; interpreting & discussing results)
Also aspects of PSE, Hi

educational activities

on-site

- Introduction to the commons and heathland ecology studies
- Species identification work, site comparison, adaptation and survey work
- Pond dipping (certain sites)
- Storytelling and history tours with commoners

school-based

- Use maps and aerial photography to explore land use on Gower
- Data interpretation work using land use data and biodiversity data
- Role play and debate activities based on Gower land use / stakeholders
- Design posters and promotional materials to help protect the commons

tandem visit suggestions

biodiversity	Bishop's Wood Local Nature Reserve, Swansea Community Farm
nearest other trail sites	Gower Heritage Centre, Penclawdd Produce and Craft Market

Gower Heritage Centre

contact: Roy Church 01792 371206 info@gowerheritagecentre.co.uk
www.gowerheritagecentre.co.uk

A heritage museum and craft centre based around a working 12th century watermill demonstrating renewable energy use and presenting changes and developments in rural life.

Visitors can see how natural resources have been used to provide a sustainable and renewable energy source to the mill buildings and workshops. Water from the Pennard Pill is fed through the site to turn the waterwheel. In the past this would have turned the millstones to crush the grain to make flour. Demonstrations of this process of flour production can still be given but the waterwheel now also powers the lathes used by wood turners demonstrating traditional crafts at the Centre. The toilet block in the adjacent car park has solar panels on the roof, demonstrating a more modern form of renewable energy use.

The Centre has its own purpose-built classroom, and on-site staff include outdoor activity leaders, craft workers, artists and environmentalists, offering a wide variety of activities for schools.

A new woollen mill is being developed at the Centre, that will feature a working weaving machine which will help in demonstrating the full process from sheep to finished fabric. It is hoped that this will eventually be used to produce the traditional Gower Blanket with the red weave pattern, known as a "Minka". Pupils will be able to participate in workshops and demonstrations involving carding, spinning and weaving.



site visits

School groups (including very large groups) welcome by arrangement. Fees charged depending on activities. Free familiarisation visits by teachers.

on-site facilities

Indoor teaching areas, toilets, outdoor and indoor displays, shop and café, picnic areas, play areas, small farm animal and pet area, hand-cleaning facilities.

site access

The Centre has its own car park with bus parking. The Centre is accessible by wheelchair and pushchair, and is very child-friendly. Walks into Pennard Valley are all on maintained footpaths or bridle paths.

potential hazards

The Centre can provide risk assessments, which are also posted on the website. Hazards depend on the activities being undertaken but include the mill leat (unfenced stretch of water), vehicles in the car park, animals, slipping on paths and steps.

curriculum links

Primary

- Sc:** Physical Processes (electricity generation)
- Hi:** Local History Study / Change (ways of life at different times)
- Art:** Investigating and Making Art, Craft and Design / using a range of materials and processes
- Also aspects of PSE, Ge*

Secondary

- Sc:** Physical Processes (energy resources and conservation)
- A-level:** Tourism and Leisure courses
- Also aspects of PSE, Hi, Ge*

resources

pupil materials	✓	staff-led activities on site	✓
teacher materials	✓	staff can visit school	

sustainability themes demonstrated at this site

- animal welfare
- biodiversity ✓
- energy ✓
- community
- food & diet
- building materials
- transport
- waste & recycling
- water

ESDGC key concepts promoted at this site

- interdependence ✓
- citizenship & stewardship
- needs & rights
- diversity
- sustainable change ✓
- quality of life
- uncertainty & precaution
- values & perceptions
- conflict resolution

educational activities

on-site

- Centre tour (waterwheel, mill, traditional crafts, farming equipment)
- Traditional craft workshops (blacksmith, miller, wheelright)
- 'Living History' workshops (Wartime Gower, Medieval Life, Romans & Celts)
- Art and craft workshops (pottery, puppetry, mosaics, woodturning and others)
- Guided walks from Centre (local history and/or the natural environment)

school-based

- Design, create and test waterwheels using a variety of materials
- Research the history of the school or local community, collecting artefacts and photos that illustrate the changes that have taken place
- Explore weaving techniques using different materials and patterns

tandem visit suggestions

energy	Environment Centre, Wind Turbine (Docks)
biodiversity	Gower Commons Initiative, Swansea Community Farm
nearest other trail sites	Bishop's Wood Local Nature Reserve, Gower Commons Initiative

Gwalia Projects

contact: Mike Green (Swansea Foyer) 01792 473377
Reverend Sue Knight (St.John's Church) 01792 473047 sueknight46@hotmail.com
www.gwalia.com

Award-winning and innovative approaches to social housing that bring together high standards of architectural design, building conservation and environmental features.

Grŵp Gwalia Cyf is a major provider of social housing in south and mid Wales comprising five housing associations (Registered Social Landlords) including Tai Cartrefi, widely recognised as a leader in the field of developing environmentally sustainable housing. Two local exemplar projects developed by Tai Cartrefi are the Swansea Foyer and St.John's Church.

Foyers are a concept first developed in France over 60 years ago and were introduced into Wales in an attempt to address the linked problems of youth unemployment and homelessness. Swansea Foyer, on Alexandra Road in Swansea, offers young homeless people access to affordable safe accommodation, education, training, employment and volunteering opportunities, with personal support, in a holistic person-centred way. Completed in April 1997, the 'Tŷ Tom Jones' (the Swansea Foyer) development provides accommodation for 28 young people, from a variety of vulnerably housed origins, to live and learn new skills in order to assist them with secure permanent employment and adapt to independent living. The building includes flats, training rooms, offices and recreational facilities built around a central 'street' communal space. The project has won a number of architectural awards for the way it redeveloped the former Working Men's Club, conserving its listed 19th century façade while providing an energy efficient, environmentally-friendly building behind.

The environmental features at the Swansea Foyer include solar panels and photovoltaic panels, water-saving devices on taps and showers, low flush toilets, low-energy lighting and a card access system to switch on lighting. The building is highly insulated, all windows are timber-framed with argon filled double-glazing and the single-glazed roof acts as a passive solar collector creating an attractive naturally lit and ventilated communal space. Swansea Foyer is now managed by Trothwy Cyf, another part of Grŵp Gwalia Cyf, which is developing a Foyers network in Wales with 6 successful projects established so far and more planned for future development.

The redevelopment of St John's Church in Hafod helped to address problems faced by a declining congregation with a building falling into disrepair. The scheme created 10 flats for the elderly to the rear of the church while retaining the front end of the building as a place of worship for the local community. The new flats are of a highly insulated timber-frame construction and part of the original church roof was glazed to allow light to enter into the internal central 'street' of the building. This improves the internal environment and also makes a contribution to the energy requirements of the space. The finished building won the Lord Mayor's Design Award for its sustainability in construction.



site visits

School groups are welcome to visit either or both project sites but only by prior arrangement. It should be noted that these are housing developments so particular care should be taken to avoid disturbing residents.

on-site facilities

Both sites have toilets. It may be possible to use meeting rooms at each site for group discussion or an introductory talk before or after a visit to the residential areas.

site access

Both sites are very accessible – St.John’s is predominately on one floor and Swansea Foyer has a lift to all floors. There is easy on-street parking outside St.John’s but parking is more difficult for the Swansea Foyer.

potential hazards

The buildings themselves offer no notable hazards but it should be noted that the Swansea Foyer is located on a very busy road.

curriculum links

Primary

PSE: Social, Environmental and Community Aspects
Ge: Settlements / Environmental Issues (managing the environment sustainably, water)
Sc: Physical Processes (electricity generation)
Also aspects of DT, Ma, Hi

Secondary

PSE: Social, Environmental and Community Aspects
Ge: Settlements / Environmental Change (environmental issues, resource issues, sustainable development)
Sc: Physical Processes (energy resources and conservation)
Also aspects of DT, Ma, Hi

resources

pupil materials	staff-led activities on site	✓
teacher materials	staff can visit school	✓

sustainability themes demonstrated at this site

animal welfare	
biodiversity	
energy	✓
community	
food & diet	✓
building materials	✓
transport	
waste & recycling	
water	

ESDGC key concepts promoted at this site

interdependence	✓
citizenship & stewardship	✓
needs & rights	✓
diversity	
sustainable change	
quality of life	✓
uncertainty & precaution	
values & perceptions	
conflict resolution	

educational activities

on-site

- Short introductory site tour with discussion on project features and benefits
- Observational drawing of buildings and structural features

school-based

- Discuss the importance of homes and community facilities to our well-being
- Investigate the use and construction of buildings in various parts of the world
- Carry out an audit of energy and water use at home or in school, research ways to reduce energy and water use and analyse costs and savings
- Explore the global applications of solar energy and other renewable technologies

tandem visit suggestions

building materials, energy	Environment Centre, Swansea Community Farm
community	Res-a-Rec, T.O.P.I.C. House
nearest other trail sites	Oxfam Shops, Swansea Indoor Market, Res-a-Rec

Mumbles Development Trust

contact: Terry Scales 01792 361012 mdt@btinternet.com
www.mumblesmatters.org.uk

Mumbles Development Trust promotes active citizenship through volunteer projects and consultation, encouraging people to get directly involved in improving their local community.

Mumbles Development Trust is a grassroots community organisation concerned with regenerating Mumbles through practical community self-help projects. These include: the Mumbles Back Lanes Improvement Project, which has involved local people tidying up the Victorian back lanes to offer quiet, traffic-free routes around Mumbles and encourage walking and improve the area for locals, visitors and wildlife; the Mumbles Green Action Team, which engages volunteers in litter picks and clearance work at various sites from Clyne Valley to Mumbles Head and Caswell Bay, including an annual beach clean at Blackpill and wildlife conservation work on Mumbles Hill; the Mumbles Local Produce Market, which provides an opportunity each month for people to meet and buy a variety of produce such as cheese, bread, pastries, meats and vegetables directly from local producers, so reducing transportation, encouraging healthy eating and supporting the local economy.

Mumbles Development Trust is based in Tŷ Hanes Local History and Resource Centre, set up by the Trust in partnership with Oystermouth Historical Association to foster community pride in the rich local heritage and encourage interest in the future of Mumbles. Tŷ Hanes provides a community recycling point for used inkjet cartridges, stamps, water filters, Christmas cards and mobile phones. The centre houses a history exhibition during the summer and provides a gallery for local artists in the winter months.

The Trust supports the exchange of information and opinions, and has organised various community consultations. The Mumbles Village Diary provides a notice-board for advertising local events and the Mumbles Matters newsletter provides a regular forum for local people to express their views.

The Trust has initiated the Broadleaf Woodland Enterprise Scheme, which will involve the development and management of local woodlands to support craft workshops, educational visits and community events. A series of guided walk leaflets, incorporating some of the sites improved by the Trust, is also being produced.



site visits

School groups are welcome, by arrangement, to visit Tŷ Hanes and have a guided tour of the area, and will soon be able to visit the Broadleaf Woodland Enterprise Scheme.

on-site facilities

Tŷ Hanes is an indoor exhibition area with toilets. The Broadleaf Woodland Enterprise Scheme site will have a covered classroom space, toilets, picnic and play areas.

site access

Tŷ Hanes is on one level and buses can drop off outside. Access around the woodland and guided walks may be restricted as there are slopes and steps.

potential hazards

There are busy roads near Tŷ Hanes and the Broadleaf Woodland Enterprise Scheme site.

Particular care should be taken when walking and with woodland activities.

curriculum links

Primary

- PSE:** Social, Community and Environmental Aspects
 - Sc:** Life Processes and Living Things (variation, adaptation, food chains, protecting the environment)
 - Ge:** Enquiry & Skills (fieldwork & secondary evidence) / Environmental Change / Managing the Environment
 - Hi:** Local History Study / Change (ways of life at different times)
- Also aspects of En, Art*

Secondary

- PSE:** Social, Community and Environmental Aspects
 - Sc:** Life Processes and Living Things (variation, food chains, classification, sustainable development)
 - Ge:** Environmental Change & Sustainability (ecosystems, economic activity, environmental & resource issues)
- Also aspects of Hi, En, Art*

resources

pupil materials	✓	staff-led activities on site	✓
teacher materials	✓	staff can visit school	

sustainability themes demonstrated at this site

animal welfare	
biodiversity	✓
energy	
community	✓
food & diet	✓
building materials	
transport	
waste & recycling	✓
water	

ESDGC key concepts promoted at this site

interdependence	✓
citizenship & stewardship	✓
needs & rights	
diversity	✓
sustainable change	
quality of life	
uncertainty & precaution	
values & perceptions	
conflict resolution	

educational activities

on-site

- Introduction to Mumbles Development Trust and its projects (Tŷ Hanes)
- Guided walks and tour of the back lanes and other local sites
- Tŷ Hanes exhibitions: local history (summer), art and crafts (winter)
- Woodland craft workshops at the Broadleaf Woodland Enterprise site

school-based

- Survey local perceptions of environmental quality and plan improvements
- Organise litter picks or tree planting in school grounds or local community
- Create a trail of the school grounds or locality to highlight features and history

tandem visit suggestions

community	Red Café, Penclawdd Produce and Craft Market
biodiversity	Bishop's Wood Local Nature Reserve, Crymlyn Bog National Nature Reserve
nearest other trail sites	Red Café, Sustrans (Foreshore Cycle Path), Blackpill Wildlife Centre

Oxfam Shops

contact: Phil Broadhurst (Castle Street) 01792 654710 castlestreetarts@yahoo.co.uk
Claire Gilfedder (Union Street) 01792 654287 shop5107@btconnect.com
www.oxfam.org.uk www.oxfam.org.uk/coolplanet

Charity shops promoting local action, campaigning for change and raising funds to tackle poverty and injustice across the world by selling reusable items and Fairtrade goods.

Oxfam is one of the world's largest development, relief, and campaigning organisations, working with others to find lasting solutions to poverty and suffering around the world. It was the first organisation to establish charity shops in Britain in order to raise funds for its charitable work. Charity shops promote the reuse of items and divert them from being landfilled or incinerated. Over 100,000 tonnes of textiles pass through UK charity shops every year reducing the need for raw materials and energy.

The Union Street branch sells Fairtrade food and gift items, as well as used clothes and donated household items. The Castle Street shop specialises in books and also exhibits artwork and displays by local artists and schools on sustainability themes. Both can provide information and organise local activities in support of Oxfam national campaigns.

Oxfam responds in emergencies in developing countries to directly save lives but also works with people to improve their livelihoods and prospects through longer-term development programmes. The charity also produces high-quality educational resources on a range of themes including: trade, debt and aid; livelihoods and education; health and HIV/AIDS; equality and human rights; conflict and democracy; natural disasters; and climate change. Cool Planet is a website specially designed for teachers, containing many downloadable resources and lesson plans.



site visits

School groups are welcome, by arrangement, to visit either of the two shops but it is probably best to limit visits to small groups as the shops are both small. Staff and volunteers can also offer school-based talks and activities linked to fair trade and global citizenship.

on-site facilities

Both shops have sorting and administration areas, as well as the retail space.

site access

The shops are near busy shopping areas and roads. Parking near to the shops is difficult. The sorting area at the Union Street Shop is on the first floor with limited access.

potential hazards

Particular care should be taken when walking near and crossing roads. Both shops have shelving and clothing rails which are potential hazards if the shops are crowded.

curriculum links

Primary

Sc: Materials and Their Properties (grouping materials and change)

PSE: Social, Community and Environmental Aspects

En: Speaking & Listening (group discussion and interaction) / Writing (inform and to persuade)

Also aspects of Ge, RE

Secondary

Sc: Materials and Their Properties (physical change)

PSE: Social, Community and Environmental Aspects

En: Speaking & Listening / Writing (group discussion & interaction; writing to inform, explain, describe, writing to persuade, argue, advise)

Also aspects of Ge, RE

resources

pupil materials	✓	staff-led activities on site	✓
teacher materials	✓	staff can visit school	✓

sustainability themes demonstrated at this site

- animal welfare
- biodiversity
- energy
- community ✓
- food & diet ✓
- building materials
- transport
- waste & recycling ✓
- water

ESDGC key concepts promoted at this site

- interdependence ✓
- citizenship & stewardship ✓
- needs & rights ✓
- diversity
- sustainable change ✓
- quality of life ✓
- uncertainty & precaution
- values & perceptions ✓
- conflict resolution ✓

educational activities

on-site

- Talk on the charity shop processes (e.g. sorting, retail) and Oxfam in general
- Exhibition of artwork on sustainability themes (Castle Street)

school-based

- Explore the waste hierarchy and waste streams – discuss the differences between recycling and reusing materials
- Design a promotional poster to encourage people to use charity shops and to reduce, reuse, recycle
- Research and debate the impact of fair trade on people and the environment
- Set up a uniform exchange scheme / Fairtrade tuck shop in school

tandem visit suggestions

waste & recycling	Res-a-Rec, Play Resource Centre
food & diet	Red Café, Environment Centre
nearest other trail sites	Swansea Indoor Market, Gwalia Project (Swansea Foyer), Environment Centre

Penclawdd Produce and Craft Market

contact: Dave Williams 01792 850162 a.spowart@btopenworld.com

A community enterprise that supports local growers and producers, encourages a sense of community and helps to reduce the local carbon footprint.

The CLP Development Group covers the areas of Crofty, Llanmorlais, and Penclawdd and is an umbrella community-run organisation established to support the regeneration of the area. One of the key projects that the group has undertaken is the organisation of a successful local produce and craft market that takes place every 3rd Saturday of the month at the Penclawdd Community Centre.

Local produce markets are good for the local economy, farmers, consumers and the environment. Money stays in the area for longer and local jobs are secured, farmers get a better price for their produce, food miles are greatly reduced, less intensive farming and less packaging is involved, and shoppers get healthy delicious produce at competitive prices. The Penclawdd market stalls offer: locally caught fish; cockles and lava bread; a wide range of meats, including salt marsh lamb; fruit and vegetables; breads; free range eggs; goats' cheeses; home-baked goods; olives; and a wide variety of other treats. The craft market includes woodturning, glassware, candles, plants, jewellery, and a local history stall. The market has become a community social event with a small café serving fair trade tea and coffee on site.

The group also produce a regular community newsletter, run the Gower Voluntary Transport Service, have been working with Sustrans to build the North Gower cycle path, and are supporting the creation of new local woods as part of the North Gower Woodland Project, co-ordinated by the Llandrhidian Hall Trust and the local wildlife trust.



site visits

Though visiting groups would be welcome to visit the market, it does take place on a Saturday and so is less than convenient for school trips. Representatives of the CLP Development Group may be willing to visit schools or meet groups visiting the area, to explain their work.

on-site facilities

The Penclawdd Community Centre has toilets and a kitchen serving refreshments on market day.

site access

The community centre is highly accessible and there is a car park but parking can be very difficult on market day.

potential hazards

The community centre is located on a narrow road which is occasionally busy, especially on the days when the market is taking place. Care should also be taken of traffic if visiting the nearby cycle track.

curriculum links

Primary

PSE: Social, Community and Environmental Aspects

Ge: Environmental Change / Managing the Environment

Also aspects of Hi, En, ICT, Ma

Secondary

PSE: Social, Community and Environmental Aspects

Ge: Environmental Change & Sustainability (economic activity, environmental & resource issues)

Also aspects of En, ICT, Ma

resources

pupil materials	staff-led activities on site	✓
teacher materials	staff can visit school	✓

sustainability themes demonstrated at this site

animal welfare	
biodiversity	
energy	
community	✓
food & diet	✓
building materials	
transport	
waste & recycling	
water	

ESDGC key concepts promoted at this site

interdependence	✓
citizenship & stewardship	
needs & rights	✓
diversity	
sustainable change	
quality of life	
uncertainty & precaution	
values & perceptions	
conflict resolution	

educational activities

on-site

- Presentation on the CLP Development Group is possible on site or at school
- Walk or ride the North Gower Cycle Path looking at heritage and ecological features

school-based

- Research and compare farming practices and food miles of typical supermarket groceries and those available at a local produce market
- Grow vegetables in the school grounds or classroom and investigate the seasonality of fruit and vegetables
- Arrange a visit to a local farm and follow the route of a product

There are several good sources of teaching resources and support linked to growing and farms including the websites www.face-online.org.uk and www.teachernet.gov.uk/growingschools.

tandem visit suggestions

food & diet	Swansea Indoor Market, Swansea Community Farm
nearest other trail sites	Sustrans (North Gower cycle path), Gower Commons Initiative, WWT National Wetland Centre Wales



- 1 Bishop's Wood Local Nature Reserve
- 2 Blackpill Wildlife Centre
- 3 Crymyln Bog National Nature Reserve
- 4 Environment Centre
- 5 Gors Community School
- 6 Gower Commons Initiative
- 7 Gower Heritage Centre
- 8 Gwalia, St John's Church

- 9 Gwalia, Swansea Foyer
- 10 Mumbles Development Trust
- 11 OxfamShops
- 12 Penclawdd Produce and Craft Market
- 13 Pitstop Car Wash
- 14 Play Resource Centre
- 15 Red Café
- 16 Res-a-Rec

- 17 Rosehill Quarry
- 18 Singleton Botanic Gardens
- 19 Sustrans
- 20 Swansea Community Farm
- 21 Swansea Indoor Market
- 22 T.O.P.I.C. House
- 23 Wind Turbine (Docks)
- 24 WWT National Wetland Centre Wales

Map of Trail Sites



- Key Road
- River
- Cycle Route
- Border of County of Swansea



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Pitstop Car Wash

contact: Jeremy Thorne 01792 581000 jeremy@pitstopautomotive.co.uk

A vehicle valeting and hand car wash business which has found practical solutions to help reduce its impact on the environment.

The owner of this local business recognises not only the importance of customer needs and good service, but also a responsibility to the environment. He believes that a business can be both profitable and ethical and has devised an innovative way to conserve natural resources and help protect the environment. Pitstop cleans and reuses waste water through a purpose-built reed bed system reducing the total amount of waste water produced to zero. This involves passing the used car wash water through a series of settling tanks and reed beds and relying on natural processes to treat it, turning the contaminants into plant food, then returning clean, reusable water.

Pitstop has sourced effective but environmentally-friendly cleaning products and uses old newspapers, supplied by customers, for the finishing in the car cleaning process. Recyclable materials are collected during the car valeting service and sorted for separate disposal. A comprehensive review of electricity usage was undertaken and changes made to the electricity supply to improve efficiency. The business has gained Level 4 in the Green Dragon Environmental Standard – one of only two organisations in Swansea to reach this level in the Welsh environmental management scheme.



site visits

Small groups can visit the site by prior arrangement, particularly at quieter times.

on-site facilities

This is a workplace with no toilets or other facilities for use by visiting groups at present, though this is being reviewed. The reed bed system is easy to access.

site access

Parking is available at the front and rear of the property. The car wash and the reed bed system are on ground level but groups may be taken to a first-floor vantage point, accessed only by a stairway, to view the process.

potential hazards

This is a place of work with vehicles, equipment and chemicals in use at all times. All visits will start with a safety talk and teachers are welcome to make a pre-visit.

curriculum links

Primary

Ge: Environmental Issues (managing the environment sustainably, water)

PSE: Social, Community and Environmental Aspects
Also aspects of Ge, Sc

Secondary

Ge: Economic Activity and its Impact / Environmental Change (ecosystems, environmental issues, resource issues, sustainable development)

A-level: Business Studies and Economics courses
Also aspects of PSE, Sc

resources

pupil materials	staff-led activities on site ✓
teacher materials	staff can visit school

sustainability themes demonstrated at this site

animal welfare
biodiversity
energy
community
food & diet
building materials
transport
waste & recycling ✓
water ✓

ESDGC key concepts promoted at this site

interdependence ✓
citizenship & stewardship ✓
needs & rights
diversity
sustainable change ✓
quality of life
uncertainty & precaution
values & perceptions
conflict resolution

educational activities

on-site

- Short tour and talk about the cleaning process, the reed bed system and what was involved in attaining the Green Dragon Environmental Standard

school-based

- Investigate the uses of water and waterways, locally and globally
- Carry out a school environmental audit e.g. energy use, water use and waste
- Prepare an action plan to improve the school's impact on the environment

tandem visit suggestions

water	WWT National Wetland Centre Wales, Crymlyn Bog National Nature Reserve
nearest other trail sites	Swansea Community Farm, Gors Community School, T.O.P.I.C. House

Play Resource Centre

contact: Michelle Parker 01792 794884 michelle@playright.org.uk
www.playright.org.uk

A positive and practical solution for dealing with waste by supplying community groups and schools with unwanted industrial materials for use in creative play and craft activities.

The Play Resource Centre works with local industry and business, taking useful, clean and safe materials which would normally be thrown away and making them available at low cost to families, schools and other organisations for use in creative play and crafts. These materials are displayed in a large self-service scrap store area. Staff can visit schools to talk about the project services and are preparing educational materials relating to the use of common waste objects. They can also source specific materials on request.

The Centre also bulk buys essentials for creative play, such as scissors, glue, glitter, crayons, and sells them at low prices to its members. There is a lending service for large or more expensive pieces of equipment including parachutes, badge making machines, boxes of puppets, dressing-up clothes and circus equipment. The Centre has a well-stocked library of books and leaflets on topics relating to play, arts and crafts, environmental issues and child development.



site visits

School groups of up to 30 pupils can visit by prior arrangement.

on-site facilities

Indoor classroom / training room, toilets, scrap store, craft shop, play equipment lending service, library.

site access

Parking available outside the Centre. Wheelchair access available to scrap store and craft shop but not to classroom / training room.

potential hazards

The Centre ensures that the waste materials are all clean and safe. The store and shop have shelving and a variety of stock at different levels.

curriculum links

Primary

Sc: Investigative Skills / Materials and Their Properties (names and uses of materials)

Art: Investigating and Making Art, Craft and Design / Using a Range of Materials and Processes

Also aspects of PSE, Ge

Secondary

Art: Investigating and Making Art, Craft and Design / Using a Range of Materials and Processes

Ge: Economic Activity and its Impact / Environmental Change (resource issues)

Also aspects of Sc, PSE

resources

pupil materials	✓	staff-led activities on site	✓
teacher materials	✓	staff can visit school	✓

sustainability themes demonstrated at this site

animal welfare
biodiversity
energy
community
food & diet
building materials
transport
waste & recycling ✓
water

ESDGC key concepts promoted at this site

interdependence ✓
citizenship & stewardship
needs & rights
diversity
sustainable change ✓
quality of life
uncertainty & precaution ✓
values & perceptions
conflict resolution

educational activities

on-site

- Tour and talk about project
- Selecting materials for school-based projects
- Recycled art workshop (charge applied)

school-based

- Create sculptures, collages and musical instruments from waste materials
- Problem solving tasks e.g. design a bridge to span a gap or take a weight
- Investigate the properties and uses of materials
- Undertake a life cycle analysis of an everyday object or product

tandem visit suggestions

waste & recycling	Res-a-Rec, Oxfam Shops
nearest other trail sites	Res-a-Rec, Gwalia Project (St.John's Church)

Red Café

contact: Kristina Williams 01792 362122 info@redcafe.org.uk
www.redcafe.org.uk

A vibrant community youth project addressing an identified community need to provide a safe, supportive environment and opportunities to learn practical and social skills.

Red Café is a youth and community project for 11-18 year olds which aims to act as a positive distraction from antisocial behaviour. It was opened in 2001 by Linden Church Trust in response to a community survey highlighting the need for quality provision for teenagers in the Mumbles area. At the heart of the initiative is the conviction that community issues are best addressed by those from within the community itself and so Red Café brings together local people who wish to respond to the needs of their locality and has a team of 15-20 volunteers.

The café opens a few evenings a week, free of charge to young people from across Swansea, with a wide range of workshops and activities. The building features furniture and fittings made from reclaimed wood and recycled materials, and serves fair trade drinks and food.

The Red Café project also offers Appropriate Education Initiatives to individuals or groups of young people who are at risk of exclusion or already excluded from mainstream education, often through referrals by agencies or schools.



site visits

School groups are welcome, by arrangement, to visit and find out about the project. The citizenship and fair trade activities are offered on site or at school.

on-site facilities

The site has toilets, audio-visual equipment, a computer suite, music and dance studios and a café, making it possible to provide lunch for visiting groups.

site access

The café and main learning space is on the ground floor but some facilities are on the first floor, which is not accessible for wheelchairs. There is a pay and display car park over the road (free in the winter months).

potential hazards

Red Café is located on the busy main road in Mumbles. Particular care should be taken if parking or dropping off on opposite side of road.

curriculum links

Primary

PSE: Social, Community and Environmental Aspects
En: Speaking & Listening (group discussion and interaction) / Writing (inform and to persuade)
Also aspects of Ge

Secondary

PSE: Social, Community and Environmental Aspects
En: Speaking & Listening (group discussion and interaction) / Writing (inform, explain, describe, persuade, argue, advise)
A-level: Business Studies
Also aspects of Ge

resources

pupil materials	staff-led activities on site	✓
teacher materials	staff can visit school	✓

sustainability themes demonstrated at this site

animal welfare	
biodiversity	
energy	
community	✓
food & diet	✓
building materials	✓
transport	
waste & recycling	
water	

ESDGC key concepts promoted at this site

interdependence	✓
citizenship & stewardship	✓
needs & rights	✓
diversity	
sustainable change	
quality of life	✓
uncertainty & precaution	
values & perceptions	
conflict resolution	

educational activities

on-site

- Presentation on the history of Red Café and its projects
- Activity workshops linked to fair trade, community participation and citizenship

school-based

- Explore issues around individual needs and wants, then conduct a survey of community needs, debate priorities, write to politicians
- Investigate the concept of fair trade and set-up a fair trade / local produce tuck shop in school
- Research the role and contribution of the voluntary sector in society

tandem visit suggestions

community	Mumbles Development Trust, T.O.P.I.C. House
food & diet	Oxfam Shops, Environment Centre
nearest other trail sites	Mumbles Development Trust, Sustrans (Foreshore Cycle Track)

Res-a-Rec

contact: Gareth Davies 01792 653553 resarec@btconnect.com
www.resarec-cyrenians.co.uk www.cyrenians.co.uk

This project addresses two important social issues at the same time: supporting some of the poorest people in our community while reducing waste that goes to landfill.

Res-a-Rec, which stands for Resettlement and Recycling, is a project run by Cyrenians Cymru, involving the collection of donated furniture and distribution to people who are homeless, in receipt of state benefits or on low income. Volunteers support the collection and delivery service and the furniture is displayed in the warehouse at the project's Hafod site.

The project also includes a paint reuse scheme and has a workshop where volunteers renovate furniture and learn a variety of crafts including mosaics, glass fusing, reupholstery and woodwork, including making new craft goods out of waste wood. The workshop provides handmade furniture and crafts using recycled, unwanted and waste materials to the Celfi Gallery and Gift Shop, on Mansel Street in Swansea. This shop is also provided with materials from another noteworthy Cyrenians Cymru project, the Dragon Arts and Learning Centre, which promotes social inclusion through arts and learning activities. This project can be found near to Res-a-Rec on Morfa Road, Hafod.



site visits

School groups can visit by prior arrangement. Small groups (up to 10) of older pupils can participate in furniture restoration workshops.

on-site facilities

Indoor furniture warehouse, toilets, craft workshop.

site access

There is on-site parking and wheelchair access throughout the site.

potential hazards

At times this can be a busy workplace with vehicles coming and going, and often heavy items being loaded, unloaded and moved around the warehouse.

curriculum links

Primary

Sc: Investigative Skills / Materials and Their Properties (grouping materials and change)

PSE: Social, Community and Environmental Aspects

Art: Investigating and Making Art, Craft and Design / Using a Range of Materials and Processes

Also aspects of DT, Ge, RE

Secondary

Sc: Investigative Skills / Materials and Their Properties (physical change)

PSE: Social, Community and Environmental Aspects

Art: Investigating and Making Art, Craft and Design / Using a Range of Materials and Processes

Also aspects of DT, Ge, RE

resources

pupil materials	staff-led activities on site ✓
teacher materials	staff can visit school

sustainability themes demonstrated at this site

animal welfare	
biodiversity	
energy	
community	✓
food & diet	
building materials	
transport	
waste & recycling	✓
water	

ESDGC key concepts promoted at this site

interdependence	✓
citizenship & stewardship	
needs & rights	
diversity	
sustainable change	✓
quality of life	
uncertainty & precaution	✓
values & perceptions	
conflict resolution	

educational activities

on-site

- Short tour and talk about project
- Demonstration of furniture restoration
- Furniture restoration workshop (small groups)

school-based

- Create sculptures and artwork from everyday objects and waste materials
- Investigate the properties and uses of materials and undertake a life cycle analysis of an everyday object or product
- Design a piece of furniture or equipment to meet a specific need
- Explore the waste hierarchy and design a promotional campaign to encourage people to reduce, reuse, recycle

tandem visit suggestions

community	Oxfam Shops, T.O.P.I.C. House
waste & recycling	Play Resource Centre, Environment Centre
nearest other trail sites	Gwalia Project (St.John's Church), Play Resource Centre

Rosehill Quarry Community Park

contact: Jannie Cherry 01792 477863

An urban green space with a fascinating history, secured and managed by a group of local people to provide a community resource, supporting recreation and promoting biodiversity.

Rosehill Quarry Community Park is a six-acre green oasis nestling amongst dense housing, with a variety of different spaces and wildlife habitats. In the 19th century, Pennant sandstone was quarried at the site and then in the first half of the 20th century, parts were levelled to house the Rosehill Tennis Club. It then fell into disuse until the Rosehill Quarry Group was set up in the early 1980s by local residents determined to save it from housing development. The group successfully persuaded Swansea City Council to purchase the area and designate it as a public open space. As a result, Rosehill remains a haven for wildlife and public enjoyment. The site has become a focus for local events, bringing people together to take responsibility for its maintenance and development.

The site has many interesting features including fresh water springs, which create shallow streams, waterfalls and ponds, and a variety of trees, shrubs and wildflowers covering the banks and rocky outcrops created from the former quarrying activities. The Park supports more than one hundred species of plants and over thirty species of birds, as well as frogs, newts, dragonflies and damselflies. The Park also provides a place for recreation for young and old where dens can be built, trees can be climbed and the impressive sea views and green surroundings can be enjoyed by all.

The site has gained the prestigious Green Pennant Award, given to high-quality green spaces that are managed by voluntary and community groups. Seating, handrails and step risers made from recycled plastic are being installed.



site visits

School groups are welcome to use the site unaccompanied but should contact the Rosehill Quarry Group so that the site can be checked for litter and damage beforehand. Volunteers can accompany visits and provide information about the site.

on-site facilities

This is an open public site managed by volunteers. There are no toilets or indoor areas but there are picnic benches and a large flat kick-around area for games.

site access

Access is via steep steps from Pantycelyn Road at the top of the site (offering tremendous views over Swansea Bay) or up a slope from Terrace Road with reasonable access to the kick-around area and quarry pond. Restricted parking at the entrance on Rosehill (near Terrace Road).

potential hazards

A site risk assessment is available but the main hazards include the water features, steps, slipping, overhanging branches, slopes and cliff edges.

resources

pupil materials	staff-led activities on site	✓
teacher materials	staff can visit school	✓

sustainability themes demonstrated at this site

animal welfare	
biodiversity	✓
energy	
community	✓
food & diet	
building materials	
transport	
waste & recycling	
water	

ESDGC key concepts promoted at this site

interdependence	✓
citizenship & stewardship	✓
needs & rights	
diversity	✓
sustainable change	
quality of life	
uncertainty & precaution	
values & perceptions	
conflict resolution	

curriculum links

Primary

PSE: Social, Community and Environmental Aspects
Art: Using a Range of Starting Points (natural objects and environments) / Using a Range of Materials and Processes
Hi: Local History Study / Change (ways of life at different times)
Sc: Life Processes and Living Things (adaptation, variation, feeding)
Also aspects of Ge

Secondary

PSE: Social, Community and Environmental Aspects
Sc: Life Processes and Living Things (variation, classification, food chains, competition, conservation)
Also aspects of Ge, Art, Hi

educational activities

on-site

- Short tour of the site, including history, biodiversity and management
- Pond dipping (teacher-led)
- Environmental games, parachute games, treasure hunts (teacher-led)
- Observational drawing – landscapes, seascapes, wildlife (teacher-led)

school-based

- Conduct an audit of green space in the community
- Make bird cake and feeders and observe the birds that use them
- Create a record of trees, plants and animal life in the school grounds
- Increase biodiversity in the school grounds by planting and creating habitats

tandem visit suggestions

community	Mumbles Development Trust, T.O.P.I.C. House
biodiversity	Singleton Botanical Gardens, Bishop's Wood Local Nature Reserve
nearest other trail sites	Environment Centre, T.O.P.I.C. House, Singleton Botanical Gardens

Singleton Botanical Gardens

contact: Steve Hopkins 01792 635490 steve.hopkins@swansea.gov.uk
www.swansea.gov.uk/botanics

A centre for horticultural studies with a new purpose-built classroom, which sets high environmental standards through composting and the production of energy from waste.

The Botanical Gardens in Singleton Park is run by the Parks Service of the City and County of Swansea and holds not only a wealth of beautiful plants but also a depth of horticultural knowledge and expertise. The gardens feature glasshouses with tropical plants, outdoor and indoor ponds, a vegetable demonstration garden, state-of-the-art formal bedding designs and a Mediterranean herb garden. These offer the opportunity to bring children into closer contact with plants, encouraging them to take an interest in the natural environment, motivating them to participate in outside activities, and supporting a greater understanding of how plants work and why they are so fundamental to our existence on earth.

Ty'r Blodau is a new purpose-built education and visitor centre located near the glasshouses and is fully equipped with learning and information technology apparatus including an interactive whiteboard and projector. Workshops and activities at the centre are tailor made for groups of all abilities and educational materials are linked to various National Curriculum subject areas. A programme of themed public talks takes place at the centre and includes practical workshops on gardening and growing food. The Parks Service also runs an active Junior Park Rangers scheme which encourages citizenship through greater involvement in the management and development of local parks.

Staff at the Botanical Gardens are striving to be environmentally friendly and sustainable. The service has an environmental policy and staff are working towards the Green Dragon Environmental Standard. Waste wood from felling and pruning in local parks and green spaces is chipped and used in a biomass boiler, which reduces the dependence on conventional fuels for heating the glasshouses. Green waste is recycled through composting for use as a soil improver with composted material from the council's domestic waste collection schemes.



site visits

School groups are welcome by arrangement. There are no charges for visiting the gardens and most school activities are free, though a charge may be levied for some teaching materials. It is highly recommend that a pre-activity visit is arranged before the students visit in order to get the most out of the facility.

on-site facilities

Indoor teaching areas including Ty'r Blodau with tables and chairs for a class of 30 pupils and interactive multimedia equipment, toilets (including accessible toilets).

site access

There is roadside parking around the perimeter of Singleton Park and a coach drop-off point alongside St Paul's Parish Church. There is wheelchair access and one un-motorised wheelchair is available on site.

potential hazards

The Centre can provide a risk assessment. The main hazards identified are tripping, poisonous plants, water features, and machinery in use on site.

resources

pupil materials	✓	staff-led activities on site	✓
teacher materials	✓	staff can visit school	

sustainability themes demonstrated at this site

animal welfare	
biodiversity	✓
energy	✓
community	
food & diet	
building materials	
transport	
waste & recycling	✓
water	

ESDGC key concepts promoted at this site

interdependence	✓
citizenship & stewardship	✓
needs & rights	
diversity	✓
sustainable change	✓
quality of life	
uncertainty & precaution	✓
values & perceptions	
conflict resolution	

curriculum links

Primary

Sc: Investigative Skills / Life Processes and Living Things (green plants, nutrition and growth, variation, adaptation, micro-organisms) / Materials and Their Properties (grouping materials and change)

Also aspects of PSE, Ge

Secondary

Sc: Investigative Skills / Life Processes and Living Things (green plants, classification, micro-organisms) / Physical Processes (energy resources and conservation)

A-level: Tourism and Leisure courses

Also aspects of PSE, Ge

educational activities

on-site

- Tour of the site including biomass boiler system and composting areas
- 'Trip to Madagascar' activity – how plants grow in different parts of the world
- Sensory walk around gardens – plants from around the world
- Propagation activities – planting herb seeds, exploring what plants need

school-based

- Grow seedlings to investigate the effects of different conditions on plants
- Research and present plant life cycles and seed dispersal mechanisms
- Develop the school grounds by planting for wildlife, establishing a vegetable plot and setting up a composting area

The Science and Plants for Schools (SAPS) project provides support and ideas for working with plants – visit the website www-saps.plantsci.cam.ac.uk for useful information and teaching materials.

tandem visit suggestions

energy	Environment Centre, Wind Turbine (Docks)
biodiversity	Bishop's Wood Local Nature Reserve, Swansea Community Farm
nearest other trail sites	Blackpill Wildlife Centre, Gors Community School, Rosehill Quarry

Sustrans

contact: David Judd 01792 467954 Davidj@sustrans.org.uk
www.sustrans.org.uk www.saferoutestoschools.org.uk

A national organisation which promotes alternatives to the car and has created 1,000s of miles of cycle routes across the UK.

Sustrans, the national sustainable transport charity, has been working for 30 years on practical projects to encourage people to walk, cycle and use public transport for health, safety and environmental reasons. Its biggest project, the National Cycle Network, comprises over 10,000 miles of cycle routes enabling access within 2 miles for half of the UK's population. Linking routes are also being developed to improve access even further.

Route 4, which stretches across South Wales, passes through Swansea via Fabian Way, the foreshore promenade and Clyne Valley. Local cycle tracks connecting to Route 4 include the Riverside Trail (Route 43), the North Gower Trail (from Gowerton to Llandhidian) and the Foreshore Cycle Path (continuing past Blackpill to Mumbles).

Sustrans also co-ordinates the Safe Routes to School initiative which encourages schools to develop a travel plan that will improve safety, reduce traffic speed and congestion, and promote walking and cycling.



site visits and access

The cycle network is open to public access. Sustrans Rangers may be able to accompany visits to local cycle tracks. Sustrans can also provide information to teachers on cycling and other transport issues and may be able to visit schools to give talks. Powerpoint presentations and display boards can also be loaned.

on-site facilities

The main cycle routes in Swansea pass many interesting historical, ecological and geographical features. For example, the Foreshore Cycle Path, with panoramic views across Swansea Bay, passes the Marina, County Hall, Swansea Jack's memorial, St.Helen's Ground, the University, etc, and follows the route of the famous Mumbles Train. There are several distinctive mileposts along the main routes, some of which have been painted by local schools. Route 4 passes near the Fabian Way Park & Ride and Route 43 passes near the Landore Park & Ride, enabling easy access for transport studies and survey work.

potential hazards

Care should always be taken when visiting or using cycle tracks – particularly at junctions. Consideration should always be given to pedestrians and other users.

resources

pupil materials	staff-led activities on site
teacher materials	staff can visit school ✓

sustainability themes demonstrated at this site

- animal welfare _____
- biodiversity _____
- energy _____
- community _____
- food & diet _____
- building materials _____
- transport _____ ✓
- waste & recycling _____
- water _____

ESDGC key concepts promoted at this site

- interdependence _____ ✓
- citizenship & stewardship _____
- needs & rights _____
- diversity _____
- sustainable change _____ ✓
- quality of life _____
- uncertainty & precaution _____ ✓
- values & perceptions _____
- conflict resolution _____

tandem visit suggestions

It is possible to walk or cycle between some of the Trail sites using local cycle tracks e.g. from the Environment Centre to Blackpill Wildlife Centre (Route 4) or to the Play Resource Centre (Route 43)

- Trail sites on or near the Riverside Trail (Route 43)** Environment Centre, Wind Turbine (Docks), Play Resource Centre
- Trail sites on or near the Foreshore Cycle Path (Route 4)** Environment Centre, Wind Turbine (Docks), Blackpill Wildlife Centre, Mumbles Development Trust, Red Café
- Trail sites on or near the North Gower Trail (Route 4)** Penclawdd Produce and Craft Market, WWT National Wetlands Centre Wales

curriculum links

Primary

- Ma:** Number / Handling Data (problem solving; processing, representing & interpreting data)
- En:** Speaking & Listening (group discussion & interaction) / Writing (inform and to persuade)
- Ge:** Enquiry & Skills / Change in the Environment (traffic congestion and public transport)

Also aspects of PSE, Sc, ICT

Secondary

- Ma:** Number & Algebra / Handling Data (collecting, processing & representing data; interpreting & discussing results)
- Ge:** Enquiry & Skills / Environmental Change & Sustainability (climate, economic activity, environmental issues, resource issues)
- En:** Speaking & Listening (group discussion & interaction) / Writing (inform, explain, describe, persuade, argue, advise, analyse, review, comment)

Also aspects of PSE, Sc, ICT

educational activities

on-site

- Walk or ride the Foreshore Cycle Path exploring the history, ecology and geography of Swansea
- Undertake transport surveys: traffic counts and interviewing cycle track, bus and park & ride users

school-based

- Conduct a survey on how pupils and teachers travel to school and present the findings verbally and graphically
 - Develop a school travel plan to improve road safety around the school and promote alternative travel
 - Organise cycling proficiency training for pupils and staff
 - Research and debate pros and cons of transport modes and alternative fuels
- The Safe Routes to School website, www.saferoutestoschools.org.uk, includes lots of practical guidance and curriculum-based resources.

Swansea Community Farm

contact: Leila Roberts 01792 578384 leila@swanseacommunityfarm.org.uk
www.swanseacommunityfarm.org.uk

A stimulating educational facility offering a wide range of opportunities for all ages and abilities to learn more about food and farming, sustainability and biodiversity.

Swansea Community Farm is home to a variety of rare breed farm animals, including pigs, sheep, ducks and chickens. Habitats well suited to the needs of native wildlife are being created through planting trees, shrubs, flowers and native hedgerows. A pond, built by the child and youth volunteers, provides a home to frogs, newts and a variety of aquatic insects and the apiary ensures there are plenty of bees to help pollinate local flowers. The compost demonstration area provides a valuable teaching resource, as well as a means of fertilising the vegetable plots.

The Community Farm has a very inclusive approach and seeks to involve a wide range of people through volunteering and training opportunities, through activities for young people, children and those with disabilities, and by engaging the local community.

The purpose-designed buildings and grounds are accessible to all and have been built with environmentally friendly features including solar panels, a wood burner, water saving devices and alternative building materials. A rainwater harvesting system is also being developed to collect rainwater from the building roofs for use in the toilets.

Beyond the main site is a small pocket of ancient coppiced woodland as well as Cadle Heath Local Nature Reserve, allowing habitat comparison studies.



site visits

School groups of up to 30 by arrangement only and a fee is charged.

on-site facilities

Indoor and outdoor teaching areas, toilets, hand-washing facilities, accessible raised bed garden. Interpretation panels are planned for around site.

site access

Car park with limited space. Buses can stop in turning circle outside gate.
Tarmac paths around buildings and near paddocks provide easy access.
Other paths are packed gravel and though accessible, can be bumpy.

potential hazards

The Farm can provide risk assessments for the site and educational activities.
Key potential hazards include contact with soil, compost and animal-borne micro-organisms; animal contact with possibility of scratches and stings. Visitors are also advised to dress appropriately.

resources

pupil materials	✓	staff-led activities on site	✓
teacher materials	✓	staff can visit school	✓

sustainability themes demonstrated at this site

animal welfare	✓
biodiversity	✓
energy	✓
community	✓
food & diet	✓
building materials	✓
transport	
waste & recycling	✓
water	✓

ESDGC key concepts promoted at this site

interdependence	✓
citizenship & stewardship	✓
needs & rights	✓
diversity	✓
sustainable change	✓
quality of life	
uncertainty & precaution	✓
values & perceptions	
conflict resolution	

tandem visit suggestions

energy, building materials	Environment Centre, Gwalia Projects
waste & recycling	Res-a-Rec, Play Resource Centre
food & diet	Penclawdd Produce and Craft Market, Swansea Indoor Market
nearest other trail sites	Pitstop Car Wash, Gors Community School, T.O.P.I.C. House

curriculum links

Primary

Sc: Investigative Skills / Life Processes and Living Things (nutrition, growth, adaptation) / Materials and Their Properties (grouping materials and change) / Physical Processes (electricity generation)

Also aspects of PSE, RE, DT, Ge

Secondary

Sc: Investigative Skills / Life Processes and Living Things (variation, food chains, micro-organisms) / Materials & Their Properties (physical change) / Physical Processes (energy resources and conservation)

Also aspects of PSE, DT

educational activities

on-site

- Animal Tour (food production, farming and animal welfare)
- Composting Activities (recycling, waste management and mini-beasts)

school-based

- Create a bottle composter (available within the Farm's teacher resource pack)
- Set-up a composting area in school
- Explore food chains and food webs
- Invite an RSPCA Education Officer to talk about caring for pets

Swansea Indoor Market

contact: Jon Llewellyn 01792 476370 jon.llewellyn@swansea.gov.uk
www.swanseaacitycentre.com

A popular and unique facility at the heart of the city centre, maintaining a long tradition of local people buying and selling local produce in a friendly and vibrant environment.

Swansea Market is the largest indoor market in Wales and one of the largest in the UK. The current market was opened in 1961, 20 years after its predecessor, in the same location, was destroyed by the 3-night Swansea blitz. The roof of the building spans 192 feet and has an aluminium double skin to prevent condensation and to maintain optimum temperatures throughout the year.

Markets have had a presence in Swansea for almost a thousand years' demonstrating the town's significance as a focus for a wide region of scattered communities. A trading market has existed since the original Norman castle was established in Swansea and the first covered market was built on the site of present day Castle Square in 1652 adjacent to the medieval castle, the ruins of which still exist.

At its peak, in the 1920's, Swansea Market boasted 670 stalls. It currently houses over 100 stalls offering a unique variety of produce, including traditional laver bread, cockles fresh from Penclawdd, welsh-cakes straight off the griddle, meat joints prepared in a traditional local Welsh fashion and vegetables and fruit fresh from Gower and Pembrokeshire. With such diversity, from fresh seafood and flowers to jewellery and Welsh souvenirs, from electrical goods to clothes and textiles, visitors can find almost anything under the market's great glass roof. The quality of local produce is celebrated each year when top-class chefs from throughout the UK visit the market for the annual Food Festival in early October. There are also special activities and demonstrations on St.David's Day and near Christmas time, including local school choirs.



site visits

School groups planning to visit the market should contact the Market Manager who may be able to meet the group and arrange an introductory talk.

on-site facilities

There are no public toilets on site but visiting groups will be allowed to use the market staff toilets by arrangement. There are café facilities and a wide variety of stalls in the market.

site access

The market is on a single floor with level entrances. There is no nearby parking but groups can be dropped off outside the Dolphin Hotel entrance on Whitewalls.

potential hazards

The main risks at this site are associated with overcrowding, the busy traffic along some city centre routes around the market, and the potential for getting lost if the group splits-up to undertake activities around the market.

curriculum links

Primary

Ge: Enquiry and Skills (collect & record evidence, secondary evidence) / Environmental Change

PSE: Community, Vocational and Environmental Aspects

Hi: Local History Study / Change (ways of life at different times)

Also aspects of PSE, En, Ma, Art

Secondary

Ge: Enquiry and Skills (collect & record evidence) / Environmental Change & Sustainability (economic activity, environmental & resource issues)

PSE: Community, Vocational and Environmental Aspects

A-level: Economics, Geography courses

Also aspects of PSE, En, Ma, Art

resources

pupil materials	staff-led activities on site ✓
teacher materials	staff can visit school

sustainability themes demonstrated at this site

- animal welfare
- biodiversity
- energy
- community
- food & diet ✓
- building materials
- transport
- waste & recycling
- water

ESDGC key concepts promoted at this site

- interdependence ✓
- citizenship & stewardship
- needs & rights
- diversity
- sustainable change
- quality of life
- uncertainty & precaution
- values & perceptions
- conflict resolution

educational activities

on-site

- Short introductory tour of the market with reference to history and features
- Customer surveys and questionnaires e.g. shopping habits and travel modes
- Interviewing traders e.g. history of family businesses, sources of products
- Observational drawing e.g. architecture, stalls, produce, etc.

school-based

- Research the source of a range of products and calculate the food miles
 - Research the development and change of local industries and agriculture
 - Set up an enterprise challenge scheme in school
- For useful guidance and resources on enterprise education, look in the KS4 section on www.teachernet.gov.uk/teachingandlearning.

tandem visit suggestions

food & diet	Penclawdd Produce and Craft Market, Swansea Community Farm
nearest other trail sites	Oxford Shops, Gwalia Project (Swansea Foyer), Environment Centre

T.O.P.I.C. House

contact: Carol Barrett 01792 642237 carole.barrett@swansea.gov.uk
beehive.thisissouthwales.co.uk/topichouse

A community facility that provides older people and carers with easy access to information, advice and support, bringing people together, encouraging active citizenship and promoting well-being.

The Older People's Information Centre (T.O.P.I.C House), the first of its kind in Wales, is based in converted houses at 56/58 Teilo Crescent in Mayhill and was officially opened in 2003. The project idea stemmed from a former regeneration project in the area, the Townhill Older People's Project. The aim was to create an easily accessible centre in which older people could receive information and advice on all age-related issues, from benefits to health problems, in an informal, non-threatening environment. By helping to remove the barriers to information and breaking down the potential for physical and emotional isolation that many older people may feel, the centre helps to build a stronger and healthier community that respects and recognises the value of everyone within it and gives everyone in the community a voice.

The centre is mainly for the over 50's, although it also helps to build cross-generational links, and provides a focus for people in a far wider area than just the immediate neighbourhood. The Centre offers a number of well-attended social activities that are organised and managed by local volunteers, in conjunction with the project workers. These include coffee mornings, a luncheon club, arts and crafts sessions, movement to music classes and IT training. There are also wider community events organised with local partnerships including play schemes, an annual lantern parade and seasonal craft fayres, where produce and handmade goods from the local community go on sale. These educational, cultural and leisure opportunities encourage social inclusion, community involvement and active citizenship.

The project is managed by a volunteer committee of service users supported by five council staff. Trainee nurses and development workers regularly visit the project for training and work experience.

To the rear of the building is a large garden complete with vegetable plots, seating areas and a polytunnel. The garden is managed organically and the vegetables grown are used to provide meals within the Centre.



site visits

School groups are welcome, by arrangement, to visit and find out about the project. Due to the size of the facility, it is not suitable for full classes or large groups.

on-site facilities

The site has toilets (though not wheelchair accessible), a garden and a large kitchen which can provide refreshments to visitors.

site access

The site is very accessible with the areas of interest on the ground floor. There is a limited amount of on-street parking.

potential hazards

The site offers no notable hazards though a teacher may wish to make a pre-visit.

curriculum links

Primary

PSE: Social and Community Aspects

Ge: Enquiry and Skills (maps, photos) / Understanding of Places (local resources)

Hi: Local History / British History / Way of Life in the Past / Past Events

En: Speaking & Listening (group discussion and interaction)

Also aspects of RE, Ma, Sc

Secondary

PSE: Social and Community Aspects

Ge: Enquiry and Skills (maps, photos, statistical information, values & attitudes)

En: Speaking & Listening (group discussion & interaction) / Writing (to inform, explain, describe)

Also aspects of RE, Ma, Sc

resources

pupil materials	staff-led activities on site	✓
teacher materials	staff can visit school	✓

sustainability themes demonstrated at this site

animal welfare	
biodiversity	
energy	
community	✓
food & diet	✓
building materials	
transport	
waste & recycling	
water	

ESDGC key concepts promoted at this site

interdependence	✓
citizenship & stewardship	✓
needs & rights	✓
diversity	
sustainable change	
quality of life	✓
uncertainty & precaution	
values & perceptions	
conflict resolution	

educational activities

on-site

- Presentation on the work of the project
- Interviewing older people on their experiences and issues

school-based

Help the Aged have a website - schools.helptheaged.org.uk - designed for pupils and teachers, with many lesson plans and class projects including:

- Census and map work – age-groups in households and use of local facilities
- World War Two Day – with support from members of the older community, recreate what life was like in 1940s Britain with food, clothing, music, etc.
- Be Lifewise – a PSE project for secondary pupils exploring generational issues

tandem visit suggestions

community	Red Café, Res-a-Rec
food & diet	Swansea Community Farm, Swansea Indoor Market
nearest other trail sites	Gors Community School, Rosehill Quarry, Gwalia Project (Swansea Foyer)

Wind Turbine (Docks)

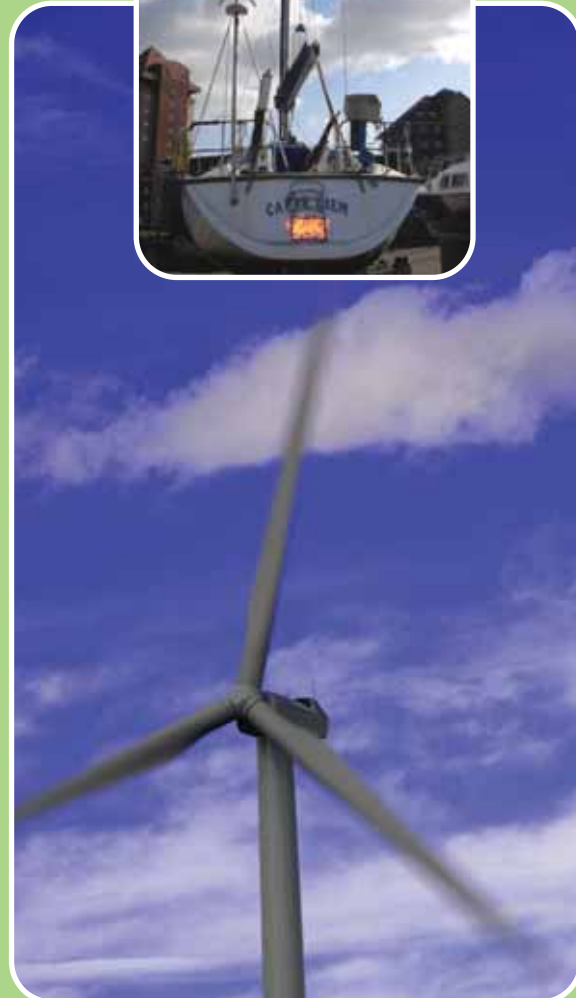
contact: Chris Day 01792 480200 chris@environmentcentre.org.uk

A wind turbine scheme run by a not-for-profit organisation to supply renewable energy to the dock area and raise funding for local community projects.

The wind that blows in Swansea is a local energy resource that can be harnessed. In many countries across Europe, particularly in Denmark, community groups or companies own wind turbines and earn money from the electricity they produce. The Swansea Bay Energy Partnership was formed to build and run Swansea's first community wind power scheme with a 43-metre high wind turbine at Phoenix Wharf in Queen's Dock. The turbine consists of a 30-metre high supporting column carrying a turbine unit with three 13-metre long blades. It has an output of 250 kilowatts of power – generating enough electricity to power 160 homes. The power created is sold to Associated British Ports and all surplus income generated by the scheme will be used to fund energy projects in the community, which aim to reduce carbon emissions. The Energy Partnership includes members of the local community together with representatives of the local authority and the environmental sector. Over the 20-year life of the turbine, in excess of £400,000 is expected to be made available for the local community.

Though it is not possible to visit the turbine, it is a prominent feature and can be viewed from many vantage points in the Marina or further afield. Many of the boats in Swansea Marina also carry small wind turbines and on the hills beyond Swansea a wind farm with several turbines is clearly visible. From Mannheim Quay and other locations in the Maritime Quarter, it is possible to view all three levels of wind energy production at the same time. It may also be worth looking at the Swansea Tawe Barrage which features a hydro turbine.

Other local wind turbine projects include a small turbine at the former Montagne Jeunesse eco-factory site by Fendrod Lake at the heart of Swansea Enterprise Park. Awel Aman Tawe is a community energy project based in the Upper Swansea and Aman Valleys which is seeking to establish a community-owned wind farm to provide funding for local projects. This scheme provides a particularly good example of community consultation and involvement.



site visits

The turbine cannot be visited by school groups but can be viewed from various locations in Swansea Marina and from across Swansea Bay.

curriculum links

Primary

- Sc:** Investigative Skills / Physical Processes (electricity generation, forces and motion)
DT: Evaluating Processes & Products / Understanding Materials & Components
Ma: Number / Handling Data (problem solving; processing, representing & interpreting data)
En: Speaking & Listening (group discussion & interaction)
Also aspects of PSE, Ge

Secondary

- Ge:** Economic Activity & its Impact / Environmental Change (environmental issues, resource issues, sustainable development)
DT: Evaluating Processes & Products / Understanding Materials & Components, Systems and Control, Structures
Ma: Number & Algebra / Handling Data (collecting, processing & representing data; interpreting & discussing results)
En: Speaking & Listening (group discussion & interaction)
Also aspects of PSE, Sc

resources

pupil materials	staff-led activities on site
teacher materials	staff can visit school

sustainability themes demonstrated at this site

animal welfare	
biodiversity	
energy	✓
community	
food & diet	
building materials	
transport	
waste & recycling	
water	

ESDGC key concepts promoted at this site

interdependence	✓
citizenship & stewardship	
needs & rights	
diversity	
sustainable change	✓
quality of life	
uncertainty & precaution	
values & perceptions	
conflict resolution	

educational activities

on-site

- Observational drawings and photographs of the wind turbine and surrounding landscape can be taken from locations in the Marina and around Swansea Bay e.g. the Sustrans foreshore cycle path or Blackpill Wildlife Centre.

school-based

The British Wind Energy Association provides a very informative website, www.bwea.com/edu, which has interactive maps and downloadable educational resources for teachers. Suggested activities include:

- Make wind speed indicators and explore the Beaufort Scale
- Build and test simple wind turbines and blade shapes
- Organise an informed debate on the pros and cons of wind farms
- Undertake a cost benefit analysis of different energy generation methods

tandem visit suggestions

energy	Environment Centre, Blackpill Wildlife Centre
nearest other trail sites	Environment Centre, Crymlyn Bog National Nature Reserve, Sustrans (Cycle Route 4)

WWT National Wetland Centre Wales

contact: Dominic Carmichael 01554 741 087 education.llanelli@wwt.org.uk
www.wwt.org.uk www.wwtlearn.org.uk

A leading national visitor attraction with interactive exhibitions and educational programmes that highlight the importance of water and wetlands for wildlife and people.

The National Wetland Centre site is managed by the Wildfowl and Wetlands Trust and comprises a highquality visitor centre and extensive grounds which include a wildfowl collection and hides looking over saltmarshes of international importance. The Discovery Centre, supported by Welsh Water, is laid out like a home with interactive displays that demonstrate the importance of water and wetlands to our lives. The Millennium Wetlands is a new 250-acre freshwater wetland reserve created out of old farmland using recycled water from Welsh Water treatment works. It offers an outstanding resource for learning about migration, habitat creation, water use and conservation, with a biodiversity trail that interprets these concepts.

The WWT education staff offer a range of activities for school groups from early years to A-level using the collection birds, ponds and different types of wetlands at the site. These range from telling stories to fieldwork sessions and are designed according to the needs and levels of visitors but with an emphasis on practical hands-on exploration and experience of the site as a stimulus for learning. A teacher information pack is available from the Centre and a large quantity of learning ideas and materials, including curriculum-linked lesson plans, can also be accessed from the national website.

The Sustrans National Cycle Route 4 passes directly by the entrance to the Wetland Centre site.



site visits

School groups are welcome but must book in advance. There is a charge for visits.

on-site facilities

The site has toilets, a dedicated classroom area, a shop, a café, play areas and picnic areas.

site access

Most public parts of the Centre are fully accessible and there are tarmac or gravel paths throughout the grounds, allowing disabled and wheelchair access to almost the entire area. Wheelchairs and electric wheelchairs are also available for borrowing but should be booked in advance. There is free car and coach parking.

potential hazards

A full risk assessment is available on request but the main potential hazards are associated with access to areas of water, contact with wild animals, hygiene issues and exposure to the weather and slipping when exploring the outside areas.

resources

pupil materials	✓	staff-led activities on site	✓
teacher materials	✓	staff can visit school	

sustainability themes demonstrated at this site

animal welfare	✓
biodiversity	✓
energy	
community	
food & diet	
building materials	
transport	
waste & recycling	
water	✓

ESDGC key concepts promoted at this site

interdependence	✓
citizenship & stewardship	✓
needs & rights	✓
diversity	✓
sustainable change	✓
quality of life	✓
uncertainty & precaution	✓
values & perceptions	
conflict resolution	

curriculum links

Primary

- S_c:** Life Processes and Living Things (variation, adaptation, food chains, protecting the environment)
G_e: Environmental Issues (managing the environment sustainably, water)
Also aspects of PSE, RE, Art

Secondary

- S_c:** Life Processes and Living Things (variation, classification, food chains, competition, conservation)
G_e: Economic Activity and its Impact / Environmental change (ecosystems, environmental issues, resource issues, sustainable development)
A-level: Tourism and Leisure courses
Also aspects of PSE

educational activities

on-site

- Learning about living things through stories and art
- Pond ecology and pond dipping activities
- Exploring the water cycle, water conservation and management
- Ecology activities – adaptation, variation, classification, using keys, migration
- Fieldwork – exploring the ecology of the saltmarsh

school-based

- Try some of WWT's web-based activities and downloadable resources linked to water, wetlands and birds which include:
- Webbing Game (exploring the interdependence of life in food chains)
 - Flocking Game (exploring predator/prey relationships)
 - Pond Bug Dial (creating an identification aid)
 - Heading South (a migration activity)

tandem visit suggestions

water	Pitstop Car Wash, Crymlyn Bog National Nature Reserve
biodiversity	Crymlyn Bog National Nature Reserve, Blackpill Wildlife Centre
nearest other trail sites	Sustrans (Cycle Route 4), Penclawdd Produce and Craft Market

sustainability themes demonstrated at the trail sites

	Page Reference	Animal Welfare	Biodiversity	Energy	Community	Food & Diet	Building Materials	Transport	Waste & Recycling	Water
1 Bishop's Wood Local Nature Reserve	4		✓					✓		
2 Blackpill Wildlife Centre	6		✓		✓					
3 Crymyln Bog National Nature Reserve	8		✓							✓
4 Environment Centre	10				✓		✓	✓	✓	
5 Gors Community School	12					✓				✓
6 Gower Commons Initiative	14		✓							
7 Gower Heritage Centre	16				✓					
8 Gwalia, St John's Church & 9 Gwalia, Swansea Foyer	18			✓	✓			✓		
10 Mumbles Development Trust	20					✓	✓			
11 Oxfam	22					✓	✓		✓	
12 Penclawdd Produce and Craft Market	24						✓			
13 Pitstop Car Wash	28									✓
14 Play Resource Centre	30								✓	
15 Red Café	32					✓		✓		
16 Res-a-Rec	34					✓			✓	
17 Rosehill Quarry Community Park	36		✓			✓				
18 Singleton Botanic Gardens	38				✓					
19 Sustrans	40							✓		
20 Swansea Community Farm	42	✓	✓	✓	✓	✓	✓		✓	✓
21 Swansea Indoor Market	44						✓			
22 T.O.P.I.C. House	46					✓	✓			
23 Wind Turbine (Docks)	48				✓					
24 WWT National Wetland Centre Wales	50	✓	✓							✓



documents that complement this guide

On the Trail of a greener brighter future (Sustainable Swansea) – a pocket guide to sustainable living in Swansea with examples from the projects featured on the Swansea Sustainability Trail.

Using Sites For Studying the Natural Environment in and around Swansea (SEEF) – includes a code of good practice and a practical checklist for field trips.

Sustainable Development & Global Citizenship: Guidance for Schools (SEEF) – an introduction to ESDGC policy and curriculum issues for schools in Swansea.

Education for Sustainable Development and Global Citizenship (ACCAC) – a Curriculum & Qualifications Guidance booklet with examples of good practice in Wales.

Address

Website

Telephone

Caswell Road, Caswell Bay, Bishopston SA3 8QR	www.swansea.gov.uk/bishopswood	01792 361703	1
Blackpill Lido, Blackpill, Swansea	www.rspb.org.uk	01269 822876	2
Dinan Road, Port Tennant	www.ccw.gov.uk/places	01792 634960	3
Old Telephone Exchange, Pier Street, Swansea SA1 1RY	www.environmentcentre.org.uk	01792 480200	4
Gors Avenue, Cockett, Swansea SA1 6SF		01792 522202	5
	www.gowercommons.org.uk	01792 391670	6
Parkmill, SA3 2EH	www.gowerheritagecentre.co.uk	01792 371206	7
	www.gwalia.com	01792 460609	8
			9
Tŷ Hanes, 4 Dunns Lane, Mumbles, Swansea SA3 4AA	www.mumblesmatters.org.uk	01792 361012	10
14 Union St (for Fairtrade goods and clothes) or 34 Castle Street (for books & music).	www.oxfam.org.uk	01792 654710	11
Penclawdd Community Centre, Banc Bach, Penclawdd SA4 3FJ		01792 850162	12
Unit 20, Cwmdu Industrial Estate, Carmarthen Road, Swansea SA5 8JN		01792 581000	13
Unit 22, Ashmount Business Park, Upper Fforest Way, Swansea Enterprise Park SA6 8QR	www.playright.org.uk	01792 794884	14
646 Mumbles Road, Mumbles, Swansea SA3 3EA	www.redcafe.org.uk	01792 362122	15
Hafod Yard, Off Morgan's Street, Hafod, Swansea SA1 2LU	www.resarec-cyrenians.co.uk	01792 653553	16
Off Penmaen Terrace, Mount Pleasant, Swansea		01792 477863	17
	www.swansea.gov.uk/botanics	01792 298637	18
	www.sustrans.org.uk	01792 467954	19
2 Pontarddulais Road, Fforestfach, Swansea SA5 4BA	www.swanseacommunityfarm.org.uk	01792 578384	20
	www.swansea-citycentre.com		21
56-58 Teilo Crescent, Mayhill, Swansea SA1 6SX	www.swansea.gov.uk	01792 642237	22
		01792 224531	23
Penclacwydd, Lwynhendy, Llanelli, SA14 9SH	www.wwf.org.uk	01554 741087	24



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