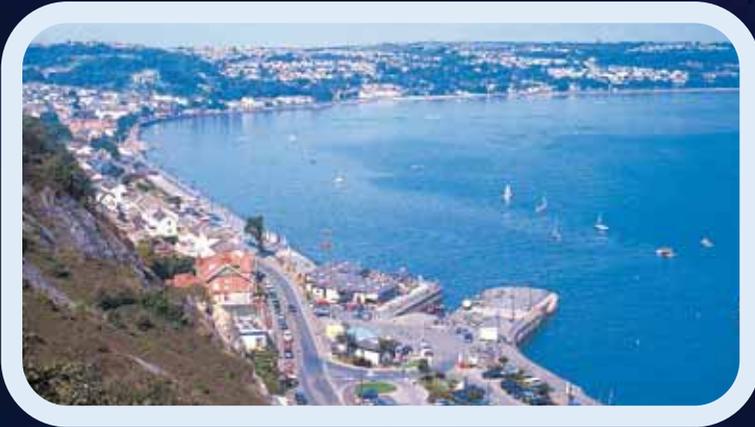


time to change



SWANSEA ENVIRONMENT STRATEGY SEPTEMBER 2006

Swansea Environmental Forum



Foreword

Those who live or work in the City and County of Swansea can access some of the most amazing coast and countryside in the UK and our urban areas are dotted with outstanding parks and green spaces. There is an air of optimism and growing confidence as exciting new developments take place in and around the city and renewal schemes bring improvements to local communities. There remains little evidence of the industrial past that once scarred the landscape and influenced changes not just locally but across the globe.

Swansea is well placed to learn the lessons of industrialisation and recognise the damage that can be done in the name of progress. The whole world now faces immense challenges as the environment on which life itself depends is threatened by climate change, biodiversity loss and the over-consumption of natural resources. We must all do our bit to ensure that decisions and developments made now do not result in problems for future generations.

Our vision is ambitious and presents a Swansea where: the natural environment we inherited is safeguarded and improved for the future; local people have better opportunities for work, learning and leisure, but the quality of life of others around the world is also respected; and where everyone understands and values the environment and tries to live more sustainably.

**Steve Brown, Chairman
Swansea Environmental Forum**

Swansea Environmental Forum

Swansea Environmental Forum (SEF) is an association of organisations and individuals working together to initiate, develop and coordinate environmental action in Swansea. Set up in 1985, SEF has organised many events, produced publications and initiated several successful projects, which include creating the Environment Centre in Swansea and the Sustainable Swansea initiative. In 2004, SEF was designated as the lead strategic partnership for all aspects of the natural and built environment in the City and County of Swansea, within the context of Swansea's community plan.

Swansea Environmental Forum's aims are to:

- develop communication and collaboration between statutory and voluntary bodies, business and industry, for the benefit of the environment;
- encourage working towards sustainable development by environmental, economic, social and other sectors;
- promote environmental awareness, education and training;
- encourage and support groups involved in environmental action.

SEF recognises that the protection and enhancement of the environment is best met within the context of sustainability and this is reflected in this environment strategy. A full list of current SEF Executive Committee members is given in Appendix 4.

For further information or to join SEF contact:

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List of Abbreviations

AONB	Area of Outstanding Natural Beauty	LEAMS	Local Environment Audit and Management System
AQMA	Air Quality Management Area	LNR	Local Nature Reserve
BREEAM	Buildings Research Establishment Environmental Assessment Method	NNR	National Nature Reserve
BSP	Better Swansea Partnership	SAC	Special Area of Conservation
CAMS	Catchment Abstraction Management Strategy	SAP	Standard Assessment Procedure
CHM	Community Housing Mutual	SCRAP	Swansea Community Recycling Alliance and Partnership
CHP	combined heat and power	SD	sustainable development
CPD	continuing professional development	SEEF	Swansea Environmental Education Forum
CSR	corporate social responsibility	SEF	Swansea Environmental Forum
CCW	Countryside Council for Wales	SINC	Site of Interest for Nature Conservation
EMS	environmental management system	SPA	Special Protection Area
ESD	education for sustainable development	SSSI	Site of Special Scientific Interest
ESDGC	education for sustainable development and global citizenship	SWWITCH	South West Wales Integrated Transport Consortium
EU	European Union	UN	United Nations
FE	further education	WAG	Welsh Assembly Government
HE	higher education	WDA	Welsh Development Agency
INSET	in-service training (for teachers)	WHQS	Welsh Housing Quality Standard

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Executive Summary

This is Swansea's first environment strategy and has been prepared by Swansea Environmental Forum to provide a framework for the protection and enhancement of the natural and built environment in the City and County of Swansea. It also seeks to raise the profile of the environment with decision-makers and build on the vision in Swansea's community plan.

The strategy presents a vision for a sustainable Swansea and sets out priorities that have been agreed in consultation with a wide range of partners. It also includes measurable indicators to help us monitor our progress. An accompanying action plan has details on what local organisations will do to implement and support the priorities.

We are all totally dependent on our environment. It provides the air we breathe, the water we drink and the food we eat. It also supports many aspects of our society and economy. The greatest challenge we face in the world today is to ensure that the impact of our actions does not threaten the welfare of others around the world or put at risk the ability of future generations to meet their needs. Climate change, biodiversity loss, pollution and the over-consumption of natural resources all endanger our environment and its capacity to support life.

To safeguard the future and create a fairer society, we must embrace the principle of sustainable development in all the choices we make and the actions we take.

Swansea has a natural environment of great diversity and outstanding beauty, assets which should be protected, enhanced and promoted. Access to and enjoyment of the countryside and green urban spaces should be encouraged for health and well-being reasons and to develop greater understanding and appreciation of nature. To halt biodiversity loss and maintain the quality of our natural environment, it is important that we continue to collect data and monitor change, identify areas for special protection and management, and involve local communities in environmental improvements.

The quality and attractiveness of our neighbourhoods and urban centres can have a direct impact on our health and social well-being, community safety and the economy. The vision presented in this strategy is of a clean, safe and high-quality built environment with well-designed and resource-efficient buildings, affordable and well-maintained housing and public spaces. Our historic environment and the heritage features that make the area distinctive should be protected and enhanced to help maintain a sense of local identity and contribute to community regeneration.

Swansea's industrial past and population growth have put pressure on natural resources and, though improvements have been made, more can be done to minimise and control the pollution and waste we create so that it doesn't present hazards to our health or environment.

Vehicle emissions are now one of the greatest causes of poor air quality in Swansea so walking, cycling and public transport should be encouraged and supported. While seeking to improve economic prosperity, we should consider water use, waste disposal, transport and the effects of new developments on communities, biodiversity and landscape.

If we understand, respect and appreciate our environment, we will be willing to make lifestyle changes and choices that ensure that it is safeguarded and improved for the future. Education for sustainable development and global citizenship in schools, colleges, workplaces and communities can provide us with the knowledge, values and skills which will enable us to participate more actively in making a more sustainable and equitable world.

Purpose of the Environment Strategy

Swansea Environment Strategy (referred to as the/this Strategy in the rest of the document) has been produced by Swansea Environmental Forum in consultation with a wide range of partners (see Appendix 3). The intention is to provide a coherent framework and vision for the protection and enhancement of the environment for the benefit of everyone in the City and County of Swansea and the wider community. Although there exist several strategies and plans covering specific environmental issues such as biodiversity, waste and transport, this is the first time that the environment as a whole has been addressed in



a single local strategic document. (Appendix 2 lists key documents that have been consulted in the development of this Strategy.)

The Strategy will provide a focus and plan of action for Swansea Environmental Forum and its partners. It will also provide a useful guide to professionals within and beyond the environmental sector and form the basis for communicating priorities and principles on local environmental issues to the general public. The accompanying action plan provides a timetable for achieving specific actions and lists the organisations that will take the lead in meeting the priorities presented in this Strategy.

Through the development and implementation of this Strategy, Swansea Environmental Forum aims to:

- provide an overarching vision and strategic framework for tackling local environmental issues;
- raise the profile of the environment within the context of Swansea's community plan and sustainable development to ensure environmental issues are considered in decision making at all levels;

- increase awareness of all aspects of the natural and built environment in Swansea and issues that affect them;
- emphasise the significant contribution the environment makes to the economy and quality of life in Swansea;
- focus the future work of Swansea Environmental Forum, as the lead partnership for the environment within the community planning process, and its partners;
- identify targets and indicators against which progress can be measured;
- highlight links and promote closer working arrangements between the environment and the other key themes and partnerships of the community plan: health and well-being, learning, prosperity and community safety.



Layout and Content of the Environment Strategy

This document is arranged into seven chapters plus appendices. This introductory chapter sets out the purpose and layout of the Strategy and places it within the context of wider sustainable development and global issues, and other strategies. The next five chapters constitute the core section of the Strategy and are described further below. The final chapter outlines how Swansea Environmental Forum will seek to implement and monitor the strategy. The appendices provide useful additional information to support the reading and use of the Strategy document.

Each of the core thematic chapters starts with an overarching vision for the theme (see next column) followed by an outline of key issues, a list of priorities and a number of indicators for measuring whether we are successful.

A detailed action plan is provided as a separate document.



A 2020 vision for Swansea's environment

The Natural Environment and Biodiversity

- Swansea's unique and diverse natural environment will be protected, enhanced and promoted to maximise social, economic and environmental well-being.

The Built Environment and Energy Use

- Swansea will have strong, sustainable and distinctive communities where everyone can enjoy a clean, safe and high-quality built environment with affordable housing, public spaces and considerably-designed and resource-efficient buildings.

Water, Land and Waste Management

- Swansea's water resources, land and waste will be managed sustainably to maximise benefits for everyone and minimise risks to the environment and human health.

Sustainable Transport and Air Quality

- Swansea's citizens will live near to work opportunities, leisure facilities and essential services, have access to a choice of convenient, efficient and attractive transport options, and enjoy clean air.

Environmental Awareness and Action

- All people living in, working in and visiting Swansea will understand, respect and appreciate our environment and will participate in positive actions towards sustainability.

The thematic chapters have been produced in consultation with a large number of officers and forums that have expertise and responsibilities relating to the main issues covered. The priorities are, in many cases, derived from more detailed and specific local plans and strategies.

Individual environmental issues should not simply be viewed in isolation but within a wider context. There are strong links between the thematic chapters and these are illustrated in a table at the end of each chapter. Finally, links are also made with the other four key themes within Swansea's **community plan**¹ *Ambition is Critical* (see also page 12) which are:

- Health, Social Care and Well-being²
- Learning
- Prosperity
- Community Safety

¹ Key terms highlighted in bold, are listed in the glossary (Appendix 1)

² Referred to as Health and Wellbeing in Swansea's community plan, *Ambition is Critical* (2004)



“Our environment is a key asset. It underpins our health, our economy and our quality of life, but there is mounting evidence that our actions are pushing natural systems beyond their ability to cope.”

Carwyn Jones AM,
Environment Strategy for Wales
(2006)

Swansea's Environment and Sustainable Development

The natural environment in and around Swansea has some of the best landscapes and most diverse habitats in the UK and our built environment has many attractive and historic features. We face a challenge to keep and improve these assets whilst at the same time trying to regenerate communities trapped in both financial and environmental poverty.

The pressure to improve economic prosperity throughout the region can come into direct conflict with the needs of the environment even though the environment supports many aspects of our economy, as well as being fundamental to our health and well-being.

The greatest challenge we face in the world today is to ensure that the impact of the combined actions of past and current generations does not put at risk the ability of future generations to meet their needs and hopes.

Sustainable development is about balancing economic, social and environmental well-being, both locally and globally, whilst trying to secure the quality of life of those who will inherit the Earth from us. As our basic human needs rely so strongly on the environment's capacity to sustain life, safeguarding the environment is paramount.

The National Assembly for Wales has a binding legal duty to promote sustainable development in all that it does.³ This is reflected in its own strategies and the encouragement it gives to other organisations in Wales to adopt policies and actions towards sustainable development.

One of the underpinning principles in the City and County of Swansea's Corporate Plan is to ensure that all its policies and actions are environmentally sensitive and contribute towards providing a sustainable future.

³ Government of Wales Act 1998 (Section 121)

Most of our actions impact on the environment but some cause more significant damage than others and put the environment and our future at risk. **Environmental sustainability** is about ensuring that the choices we make and the actions we take do not have detrimental effects on the environment's capacity to sustain life, now and in the future.

Within the context of this Strategy, activities that risk significant, long-term or irreparable damage to the environment are considered to be unsustainable, whilst activities, projects and organisations that limit the damage they cause or improve the condition of the environment are considered to be more sustainable.



"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Our Common Future
Brundtland (1987)

Threats to Our Environment

There have been many visible improvements to Swansea's environment in recent decades, often driven by greater awareness and changes in public attitudes and behaviour. However, many threats still exist, including increases in development, consumption and traffic, which result in ever more waste and pollution and increasing loss of biodiversity.

Climate change is one of the most pressing concerns and illustrates how all aspects of the environment are interrelated, and connected to our lives both now and in the future. We all contribute to climate change, both directly through use of fossil fuels for energy and travel, and indirectly through the goods that we purchase. It is important that we not only seek to reduce energy demand and carbon emissions but also find ways to adapt to changes that are already underway. This is an issue that is returned to throughout the Strategy.

Global Perspectives

We live in an age of increasing globalisation where the daily choices that we make can impact on people all around the world and their actions can impact on us. Climate change and the effects of many other environmental problems are also not restricted to individual countries. An important aspect of sustainable development is having a global perspective, recognising our relationship with others and respecting their rights and aspirations.

Swansea has gained **Fairtrade City** status in recognition of a commitment that many organisations have made to fair trade products. The local authority has also declared support for the **UN Millennium Development Goals** (see Appendix 7). These are examples of initiatives that can raise awareness of global issues and social justice, and help us move towards a more sustainable and equitable world.



Although the majority of the world's population use less than their fair share of the Earth's resources, others consume far more than their fair share. **Ecological footprinting** is a system for measuring whether our lifestyle is sustainable in terms of what the Earth as a whole is able to support. For example, it has been calculated that if everyone in the world had a similar lifestyle to that which an average Welsh inhabitant currently has, then we would need the equivalent of nearly three planet Earths to sustain our consumption.⁴ In the future, ecological footprinting may provide a useful tool for measuring Swansea's progress towards sustainability.



⁴ Reducing Wales' Footprint, WWF Cymru (2005)



The Economy, Health and the Environment

A healthy, rich and diverse environment is the key to ensuring that we also have a strong economy and healthy, safe communities. Research shows that the environment contributes considerably to the Welsh economy, generating related goods and services to the value of £8.8 billion each year – 9% of Welsh GDP⁵. Swansea is well placed to benefit substantially from the opportunities presented by its environment but in so doing must consider the longer term. All businesses and industries rely upon resources from the environment to some degree, but our environment is not an infinitely renewable resource and must be protected, maintained and enhanced for everyone's benefit now and in the future.

Developing a reputation for Swansea as an attractive and healthy place to live and work, depends upon the quality of its environment. A cleaner, less-polluted city and county can have positive effects on attracting business to the area and is important for the health and well-being of its residents, workers and visitors. Environmental problems have a significant impact on our health and well-being⁶ but conversely, access to and enjoyment of a high quality natural and built environment can improve our health and our quality of life.



Social deprivation has been linked to poor environmental quality,⁷ though further research is needed to explore this link. If community regeneration and development projects are to be sustainable they should include environmental improvement. Likewise, communities should be engaged in the planning, implementation and management of environmental schemes.

Interest in and use of **social accounting** is growing as a method of assessing the contribution that a business or organisation makes, not just in economic terms but also in social and environmental terms. It is a system that can help bring measurable recognition to social enterprises for the impact they have on beneficiaries and communities, and can also help companies demonstrate their **corporate social responsibility** (CSR) – a principle supported by the Welsh Assembly Government's (WAG's) *Sustainable Development Action Plan*.

⁵ Valuing Our Environment: Economic Impact of the Environment of Wales, National Trust et al. (2003)

⁶ Better Environment, Healthier People report, Environment Agency (2005)

⁷ Environmental Exclusion Review, Neighbourhood Renewal Unit, ODPM (2004)

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The Community Plan and other Strategies

In May 2004, Swansea’s first community plan, *Ambition is Critical*, was launched by the Better Swansea Partnership (BSP), setting out a shared vision for making Swansea a better place in the context of sustainable development. The vision in Swansea’s community plan is “by 2020, Swansea will be a distinctive European city:

- that compares with the best
- that invests in the future
- where everyone matters
- that values its culture and heritage”

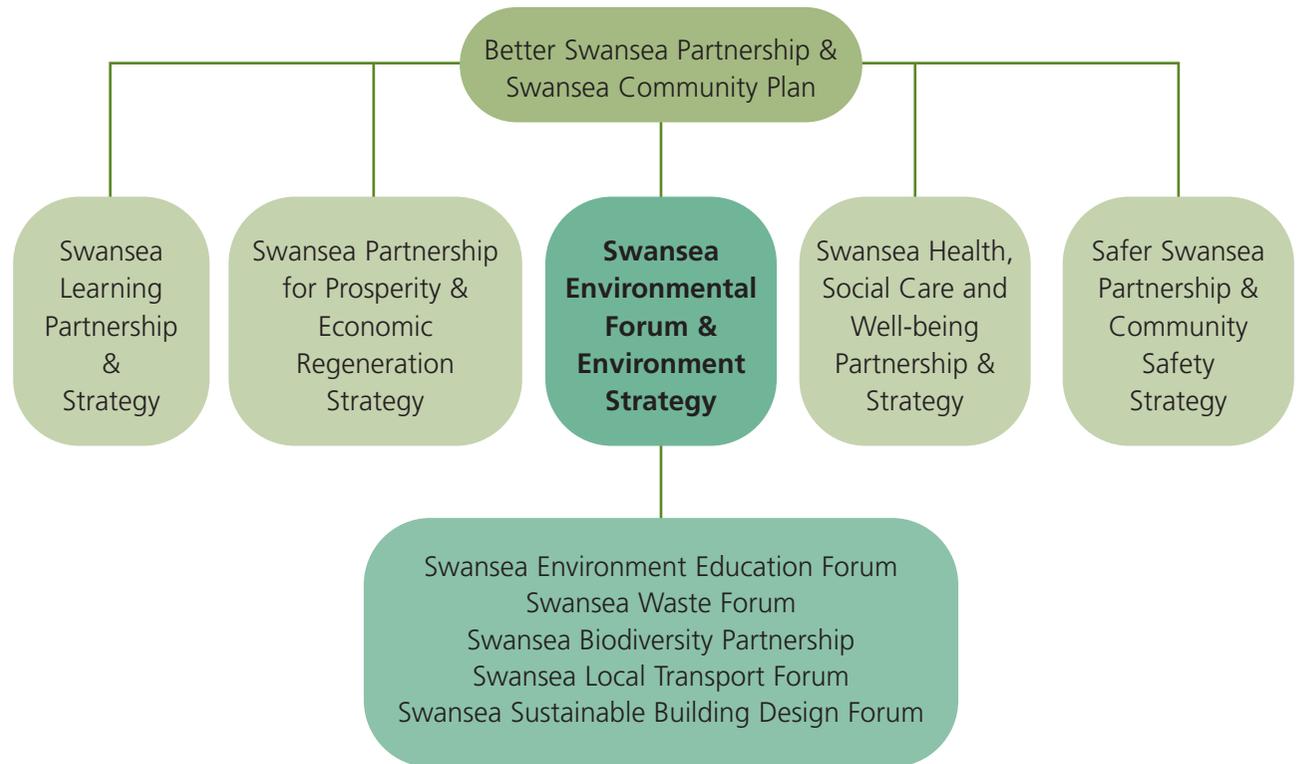
Ambition is Critical has five key themes, one of which is the environment. Swansea Environmental Forum (SEF) is the lead partnership for this theme. SEF has prepared this Strategy to build on the community plan vision and present aspirations for all aspects of Swansea’s natural and built environment.

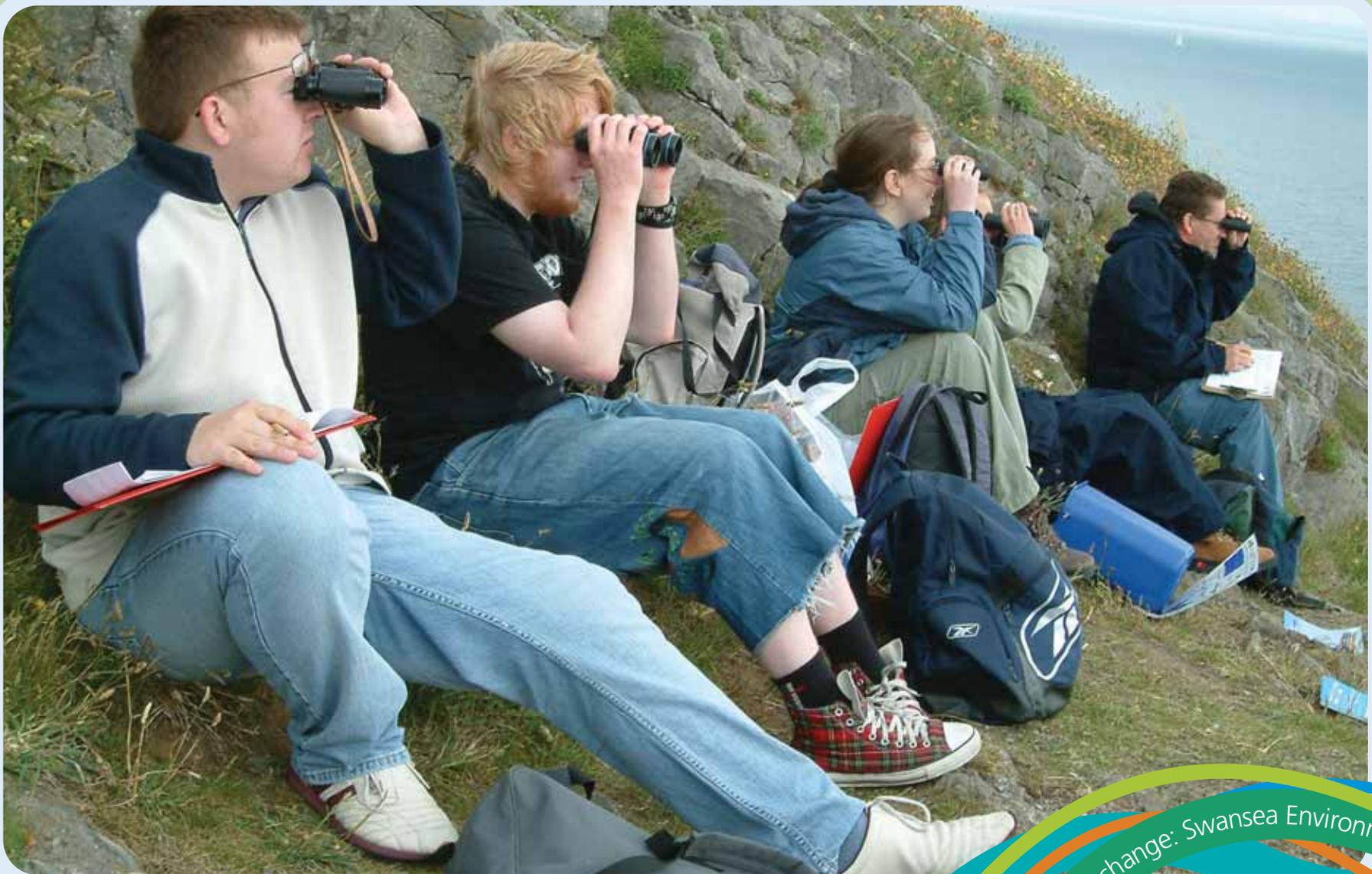
The City and County of Swansea’s corporate and improvement plans confirm the local authority’s commitment to environmental sensitivity and a sustainable future.

The Welsh Assembly Government (WAG) has developed an environment strategy and action plan for Wales, which highlights key issues facing Wales’ environment and lists outcomes that WAG would like to achieve by 2025.

Swansea Environment Strategy and action plan will help to apply many aspects of WAG’s national strategy at a local level. It also supports many of the principles outlined in *Wales: A Better Country*, WAG’s Strategic Agenda.

Key Partnerships and Strategies Linked to Swansea’s Community Plan





The Natural Environment and Biodiversity

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2020 vision: Swansea's unique and diverse natural environment will be protected, enhanced and promoted to maximise social, economic and environmental well-being.

The City and County of Swansea's natural environment is of outstanding quality and makes up about 80% of the County's total area, ranging from scenic upland habitats to coastal areas, and contributes to Swansea's distinctive character. The diversity of habitats and species makes Swansea one of the most biodiverse counties in the UK.

Biodiversity is the variety of life on earth and includes plants, animals and micro-organisms and the wide range of habitats in which they live. It provides a clear indication of the health of our environment in general.

Swansea also has a wealth of important geological and archaeological sites and highly attractive landscapes and seascapes that are a valuable part of our heritage. These illustrate the interaction between biodiversity, geology, climate and man's activities over many centuries.

It is both our responsibility and in our own self-interest to look after these natural assets which enhance our quality of life, support good health and contribute to the economy through job creation, tourism and attracting investment. The natural environment needs protection and



sensitive management for the long-term benefit of Swansea residents and the wider population. Raising awareness and involving communities in

the management of green spaces is crucial to successfully protecting our natural assets for this and future generations.



Biodiversity and Landscape

Our natural heritage is threatened by pollution, development, climate change, habitat fragmentation, inappropriate management and neglect. Swansea Biodiversity Partnership has developed a **Local Biodiversity Action Plan (LBAP)** which sets out how to manage sites in order to protect important species and habitats and the wider biodiversity resource. This flows from an international agreement⁸ and a national commitment⁹ to protect biological diversity. There is additional legislation and several directives at national and international levels to protect biodiversity¹⁰.

It is essential to develop a sound knowledge and understanding of the biodiversity we have in order to set clear priorities, apply effective management plans and comply with legislation. Although we already have a substantial amount of data, there will always be a need for more information on the extent, distribution and condition of habitats and species, and on geological features.

Landscape features in Swansea are being mapped and characterised using **LANDMAP**, a specially devised national landscape information system. Surveying the natural environment and monitoring change offers considerable opportunities for training, volunteering and employment.

Approximately 17% of the County's area is protected by European or National designations such as **Special Protection Areas (SPAs)**, **Ramsar sites**, **Special Areas of Conservation (SACs)**, **National Nature Reserves (NNRs)** and **Sites of Special Scientific Interest (SSSIs)**. A further 30% has been identified as being of significant local ecological interest. This includes six **Local Nature Reserves**, many Wildlife Trust reserves and other undesignated sites – **Sites of Interest for Nature Conservation (SINCs)**.

All green areas have the potential to become richer in wildlife through appropriate habitat creation or appropriate landscaping work. Parks, gardens, school grounds, highway verges and other urban green spaces can be managed to increase biodiversity and help reduce the fragmentation of habitats.

⁸ Convention on Biological Diversity, UN World Summit (1992)

⁹ UK Biodiversity Action Plan (1994)

¹⁰ Wildlife and Countryside Acts (1981 and 1985), Countryside and Rights of Way Act (2000), Habitats Directive, Birds Directive and others

Priorities

Establish and maintain data on the natural environment and monitor change

INDICATOR:

- percentage of habitats mapped

Protect and safeguard our valued natural assets and halt loss of biodiversity

INDICATORS:

- percentage loss of important habitats (LBAP)
- total area of LNRs, AONB and SINCs
- percentage of SSSI features in or recovering towards favourable condition

Important sites for wildlife in Swansea	Number of sites	Area of land (ha)
Ramsar sites	2	68,700
Special Areas of Conservation	5	5,100
Special Protection Areas	1	33,400
Sites of Special Scientific Interest	33	11,260
National Nature Reserves	4	1,370
Area of Outstanding Natural Beauty	1	18,800
Local Nature Reserves	6	90
Wildlife Trust Reserves	24	210
RSPB / Woodland Trust Reserves	2	45

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It is estimated that about half of Swansea's countryside is owned or managed for nature conservation. The sustained and long-term maintenance of the natural environment, and the creation of new habitats and open spaces, is resource intensive and current resources are insufficient. The encouragement and support of social enterprises to undertake such work may contribute towards meeting the demand. It is also important to engage with farmers and landowners in the management of farmland, forestry and other areas for the benefit of biodiversity and landscape, especially at a time of great change in the agricultural sector.

Agri-environment schemes, such as **Tir Gofal**, play a key part in developing more wildlife-friendly landscapes and enhancing biodiversity. Landowners, such as the National Trust, can play an active role in managing for access, nature conservation and archaeology.



The landscape of the Swansea area is of particular importance both in historical and aesthetic terms and is another aspect in need of more assessment and protection. Gower was the first **Area of Outstanding Natural Beauty (AONB)** designated in the UK, in recognition of the national importance of its wonderful landscapes. The Gower AONB covers approximately 40% of the City and County of Swansea and attracts about 2 million visitors each year. A new management plan for the AONB, to be published soon, will outline its special qualities and the pressures impacting on them. This will also include a 5-year action plan and a 20-year vision.

Swansea's 34 miles of coastline includes some of the most beautiful beaches and most important limestone cliffs and saltmarshes in the country. Much of it has been designated as a **Heritage Coast** and many beaches regularly gain quality awards. As with all coastal and marine areas throughout Wales, better strategic management and protection is needed. This could be addressed through new local coastal and marine partnerships and strategies.

Landscapes are naturally dynamic but climate change and resultant sea level rise will have



significant effects on landscapes, biodiversity and other natural features. Habitats and landscapes are threatened and some species will be forced to migrate. Ensuring a network of connected areas of green space is important and flexibility will be required in the way we protect and manage the natural environment. Plant life absorbs carbon dioxide (CO₂) and may have an important role to play in reducing the effects of global warming.

Priority

Maintain and enhance the quality and diversity of the natural environment

INDICATORS:

- percentage area of green space managed for biodiversity
- number of Green Flags, Green Pennants and Green Coast Awards

Access to the Countryside and Green Spaces

People gain considerable enjoyment from the natural environment. With increased leisure and mobility opportunities, more people are visiting the countryside and taking part in environmental activities that can benefit health and well-being. Countryside visitors must always follow the *Countryside Code*, of course, if their own safety and wildlife are to be protected.

There is potential to support the local economy by further developing tourism based on and sensitive to the environment. Swansea's natural environment is often taken for granted but resources for its protection and enhancement need to be increased. A funding plan is required to explore potential new sources and mechanisms for investment such as through businesses that directly benefit from the quality or use of the countryside.

All communities should have access to the natural environment within walking distance of where they live, as promoted by both the Countryside Council for Wales (CCW) *Green Space Toolkit* (2006) and WAG's Strategy for Sport and Physical Activity, *Climbing Higher* (2005). A well-maintained and interconnecting network of green spaces in urban areas would ensure this, as will access land and the rights of way network elsewhere.

Green urban spaces can improve the image of the area as well as contributing to biodiversity. Care should be taken when considering the redevelopment of brownfield sites as these can possess significant biodiversity value and, in some cases, may support rare species.

More can be done to improve access to and within wildlife sites, the countryside, coastal areas and green urban spaces, to enable people of all abilities to enjoy nature.



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The local Countryside Access Plan (due to be published in 2007) and the Local Access Forum have key roles to play in ensuring this improvement. If open access land, nature reserves, parks and other sites are to be promoted as recreational and visitor resources, it is important that the visitor experience is positive and enjoyable. Where appropriate, sites should be maintained to national standards such as the **Green Flag Award**, **Green Pennant Award** and **Green Coast Award**.



time to change: Swansea Environment Strategy

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Community Involvement with the Natural Environment

Awareness of the unique quality of Swansea's natural environment, and the immense benefits it brings to our quality of life, needs to increase at all levels and across all sectors, especially amongst decision makers. Further action and resources are also needed to encourage and support all communities, particularly disadvantaged and ethnic minority communities, to interact more with

Priority

Promote awareness, access and enjoyment of the natural environment

INDICATORS:

- number of events in or about the natural environment
- length of easy-to-use footpaths and other rights of way

the natural environment, to contribute to decision making about their neighbourhoods and to take an active role in managing and improving them.

Conservation projects can provide considerable opportunities for volunteering and training, which can lead to increased confidence, skills development, social rehabilitation and employment. However, effective community involvement in environmental projects and

enhancement schemes needs to be backed up with good information, advice and support.

The varied landscapes and ecology of the City and County of Swansea, including parks, nature reserves and other green spaces, provide a vast range of source material for environmental education and there is potential to make more effective use of the natural environment as a teaching resource for local schools, colleges and adult education. There is a particular need for resources to support effective outdoor learning and school grounds development.



Links to Other Themes

Environment Strategy:

Built Environment and Energy

Building developments can have a negative impact on the natural environment and cause biodiversity loss, but incorporating green space within urban settings can help to support biodiversity and improve the aesthetic quality of the built environment.

Water, Land and Waste Management

Water pollution, fly-tipping, littering, mineral extraction and poor waste disposal can all have detrimental effects on landscapes and wildlife. Improving water quality, limiting mineral extraction and controlling waste can reduce the negative impact on nature and human health.

Sustainable Transport and Air Quality

Transport systems provide access to the natural environment but can also contribute to damaging it. Poor air quality, acid rain and climate change can put both nature and human health at risk.

Environmental Awareness and Action

Increasing our understanding of the natural environment, taking part in conservation projects and improving the environmental impact of our lifestyles can contribute to the protection of valued landscapes and biodiversity.

Community Plan:

Health, Social Care and Well-being

A high-quality and diverse natural environment can have a positive effect on physical and mental health by providing a wide variety of opportunities for exercise, enjoyment and leisure.

Learning

Increasing our understanding and appreciation of the natural environment can lead to behaviour which protects and enhances rather than damages it. A diverse natural environment can provide the setting for wide-ranging learning opportunities.

Prosperity

The attractiveness of our natural environment can contribute significantly to our economy through tourism and by encouraging people to visit, work, live and invest in the area. Conservation projects provide good opportunities for volunteering, training and employment. Environmental technology is a growth sector and could thrive in the local setting with direct links to higher education and the **Techniums**.

Community Safety

Urban landscaping can be designed and managed to limit crime and disorder, improve security and surveillance, and strengthen the sense of community pride. Leisure activities within the countryside, parks and urban green spaces need to be managed to minimise anti-social behaviour and disturbance to wildlife and other users.

The Built Environment and Energy Use

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2020 vision: Swansea will have strong, sustainable and distinctive communities where everyone can enjoy a clean, safe and high-quality built environment with affordable housing, public spaces and considerably-designed and resource-efficient buildings.

The quality and attractiveness of our neighbourhoods and town centres can have a direct impact on our health and social well-being, community safety and the economy.

The built environment is a consequence of decisions made by our ancestors, which give it the unique quality it has today. Central Swansea was devastated during the war, but still retains most of its medieval street plan, and buildings survive from every subsequent period. The influence of mining and the copper works that made Swansea the copper capital of the world can be seen in many of Swansea's districts, whilst the rural villages reflect the farming, seafaring and mining traditions. Most residents live within easy reach of the countryside or the wonderful network of green spaces and parks that are characteristic of Swansea.

Swansea is said to be made up of over 100 different communities living within the city centre, satellite towns and rural villages. Its population is expected to grow and change over the next decade and the provision of additional



housing, workplaces, services and facilities will be necessary. Such developments need to be sensitive to local distinctiveness and wider environmental and social concerns. Repairing and bringing back into use old buildings can help maintain a sense of local identity and contribute to economic regeneration.

Homes and other buildings should be built or renovated with efficient use of energy and other resources in mind, not just during construction but in the long-term use of the building. It is also for long-term benefit that Swansea is committed to an appropriate level of energy generation from renewable sources through both small-scale and larger installations.



Sustainable Communities and Regeneration

Every community is entitled to a high-quality, vibrant, well-planned and well-maintained built environment, which has pedestrian-friendly streets, **integrated transport**, attractive and convenient public spaces, habitat niches for biodiversity and respect for local distinctiveness. There are benefits in employing traditional urban design that provides clear central areas edged by active building frontages, which accommodate a healthy mix of workplaces, housing, leisure facilities, retail outlets and community facilities.

Identifying regeneration or improvement areas in local strategies and development plans can assist in focusing resources, both public and private, to address poor-quality public spaces and poorly maintained buildings. The Joint Regeneration Initiative in Swansea aims to provide a coordinated and holistic approach in targeting areas and, along with community regeneration trusts, looks to support communities in expressing and delivering their aspirations.

Swansea's City Centre Partnership has been specifically working to improve the profile, appearance and facilities in the city centre and develop it as an effective regional shopping,

leisure and cultural centre for South West Wales. There have already been noticeable improvements in maintenance and cleanliness, and fly-posting in the city centre has significantly reduced since the introduction of the **Authorised Street Promotion Scheme**. Integrating the city centre with the seafront developments and outlying districts through physical changes and enhanced pedestrian, cycle and transport links will help to improve accessibility and counter the threat from out-of-town shopping facilities.

Improving the quality of the built environment includes making our communities safer, cleaner and more pleasant to live and work in. Litter, fly-tipping, graffiti, dog-fouling and loud noise are problems that many people experience every day. These negatively affect local environments and cost significant amounts of public funds to rectify. Enforcement through fixed penalty notices may help to combat such problems. Swansea also uses the **Local Environment Audit and Management System (LEAMS)** to independently audit and report on street cleanliness and measure improvements.

Together with poor building maintenance and housing, environmental problems can be of particular significance in deprived communities where it can lead to a cycle of economic and social decline and poor health. Developing a community-focussed approach, encouraging participation in planning and implementing neighbourhood renewal is likely to result in sustained positive change.

Priority

Improve the quality and attractiveness of the city centre, other settlements, neighbourhoods and streetscapes

INDICATORS:

- percentage of brownfield sites/disused buildings remaining
- percentage cleanliness at high standard (LEAMS)
- percentage of public satisfaction with their local area

Well-designed and Energy-efficient Buildings

New buildings should be designed so that they are considerate to their neighbours and the character of their surroundings. In order to stand the test of time they should be structurally sound and designed with built-in flexibility in mind so that they can respond to future changes in use and continue to be accessible to all users.

Building developments and improvements to existing properties should have a high quality of architectural design whilst taking account of the historic environment, community safety and whole-life costing. Waste and disruption can be minimised during construction and in the longer term if materials chosen and features installed are designed to minimise maintenance, running costs and environmental impact. Increasing resilience to storms and flooding, and greater temperature control may be necessary to meet the challenges of future climate change.

The use of **brownfield sites** and disused buildings could be prioritised and where possible, the inclusion of energy efficiency measures, renewable energy installations and water saving devices promoted. Energy recovery and **combined heat and power** (CHP) schemes, for example, can improve energy efficiency and reduce carbon emissions.

Such considerations could be supported by a local sustainable design guide for builders and developers. Public and community buildings in particular should set a high standard.

The **Buildings Research Establishment Environmental Assessment Method** (BREEAM) has been

used for many years to assess the environmental performance of both new and existing buildings in the UK. BREEAM, and the related **EcoHomes** scheme, could be used to measure progress in Swansea and identify demonstrations of best practice in environmental design and management.

The energy efficiency of domestic buildings is rated by the **Standard Assessment Procedure** (SAP) which is currently a requirement for new dwellings, homes undergoing major alterations and all social housing. The SAP rating in Swansea is in line with the national average. All home sellers now have to provide a Home Condition Report, which includes an energy rating. This should help drive domestic energy efficiency improvements in the private housing sector.



Swansea is fortunate to have an Energy Advice Centre which helps householders access information and grants for improving the energy efficiency of their homes.

Priority

Promote sustainable buildings and more efficient use of energy

INDICATORS:

- SAP rating for the City and County of Swansea
- number of EcoHomes and buildings with BREEAM standard

Energy Generation and Renewable Energy

Different methods of energy generation have differing impacts on the environment and climate change. If Swansea is to play a full part in moving Wales' energy dependence away from CO₂-producing fossil fuels, then we must be willing not only to promote energy efficiency but also support alternative and renewable energy generation schemes at both the large scale and at the domestic or community level. A sustainable energy plan for Swansea will help to improve Swansea's capacity to contribute to national targets for carbon emissions and renewable energy generation.

Well-established renewable energy technologies that use biomass fuels or harness wind, water and solar power are continually improving but high capital costs, adverse public opinion and planning procedures have restricted their application.



Using solar panels to heat water, for example, is becoming widely recognised as both efficient and affordable.

Although renewable energy use can help reduce climate change, provide employment and bring economic benefit to communities, large-scale schemes can impact on the landscape and the natural environment. Nuclear power and energy-from-waste projects raise concerns about pollution and health, demanding careful consideration and informed public debate.



Priority

Ensure the supply of high-quality, affordable and social housing within mixed, settled and inclusive communities

INDICATOR:

- proportion of social housing meeting WHQS
- proportion of properties vacant

Housing Provision

More than two-thirds of Swansea households own their own homes with the rest renting from the council, housing associations or private landlords. The demand for all forms of housing in Swansea, but particularly for single person occupancy, is likely to increase as the population grows and demographics change. House prices are expected to continue to rise, partly fuelled by people being attracted to Swansea from more affluent parts of the UK. Measures need to be taken to ensure that sufficient affordable and low-cost occupancy homes are included in new housing developments.

The local authority manages an ageing stock of council housing which is becoming increasingly difficult to maintain at the standards set by the Welsh Assembly Government. In order to help meet the new **Welsh Housing Quality Standard** (WHQS), the local authority is proposing a transfer of its stock to a newly established Community Housing Mutual so that the necessary resources can be raised and invested. The WHQS includes objectives relating to energy efficiency and the attractiveness and safety of the surrounding environment so its introduction should have a positive impact on the revitalisation of deprived communities, help to combat fuel poverty and provide more secure accommodation.

The privately rented sector provides a valuable contribution to the housing supply but some of the worst conditions are found in this sector, which is used by some vulnerable and low-income household groups. As part of its approach to regulating and raising standards, the local authority operates a Landlord Accreditation Scheme. The local authority also administers grants to help home owners renovate and repair their properties or improve disabled access. Swansea Care and Repair, a community-based charity, also provides assistance in maintaining properties.

At any one time there are about 4,000 empty homes in the private sector, of which nearly half are empty for more than 6 months. A significant number have been empty for more than 10 years and, together with derelict commercial buildings across our communities, they contribute to urban decline. The local authority's Empty Property Strategy proposes to intervene through a combination of advice, encouragement, grants and enforcement to address this problem.



If homes and buildings are to contribute effectively to local communities, they ought not to be considered in isolation but in terms of their relationship to the people who live and work in them, and to their local environment, streetscape and history. The location, accessibility and adaptability of new housing are critical to the long-term viability of communities.

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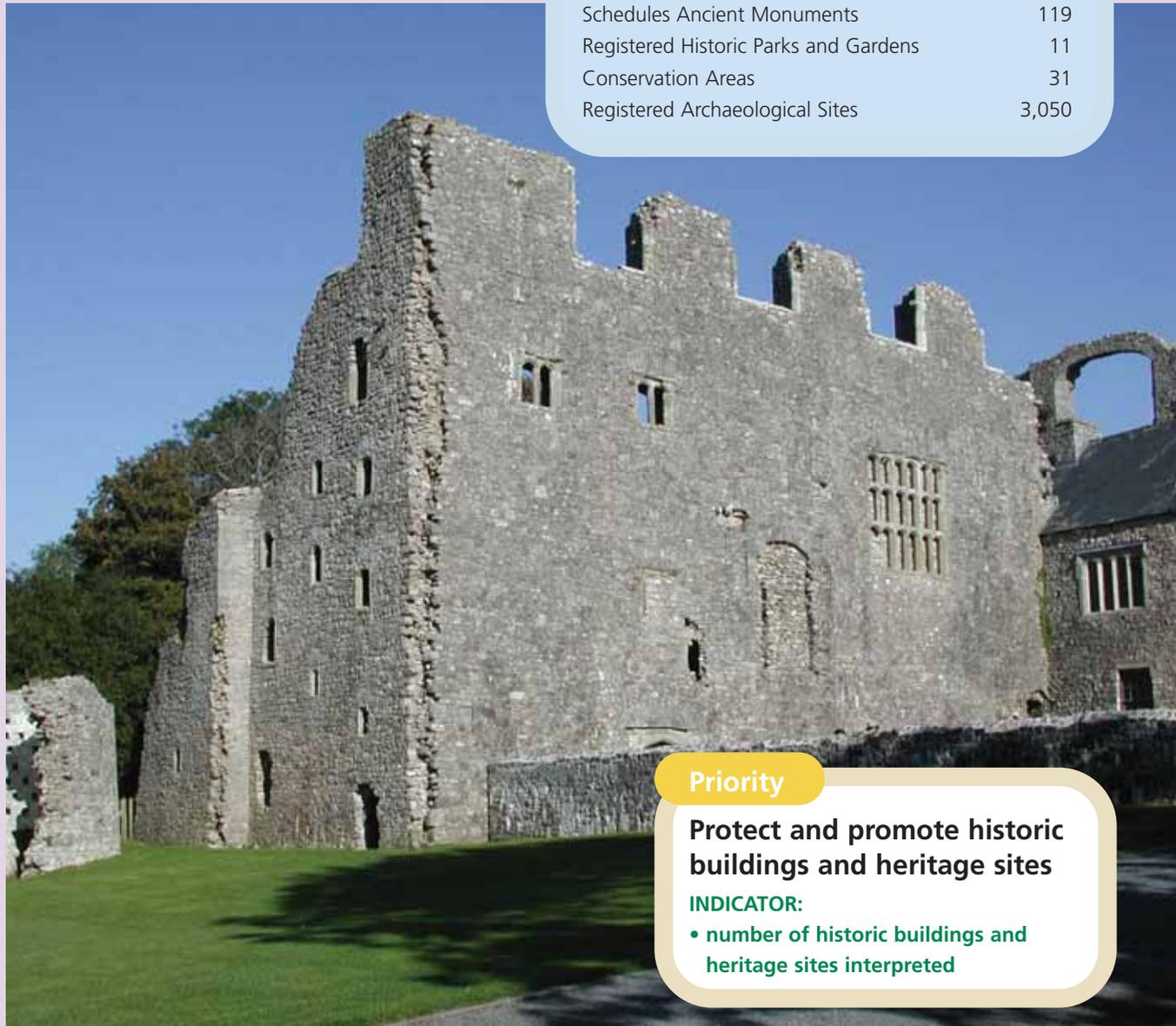
Historic Buildings and Heritage Features

The historic environment adds an important dimension to the areas where people live and work. From its foundation in the 12th century, Swansea has provided a focal point for the surrounding countryside, as an administrative centre, market and port, and then also as a seaside resort and manufacturing centre. Many of its districts grew up around copper works and mines to provide housing for workers, and they still retain distinctive characteristics.

There are over 3,000 archaeological sites and monuments in the City and County of Swansea, of which 119 have been designated as being of national importance. These include burial monuments, Iron Age forts, castles, churches and industrial monuments. There are 518 listed buildings and eleven registered historic parks and gardens, and parts of Gower are **Registered Landscapes of Outstanding Historic Interest**.

These community assets reflect and recount the rich history of Swansea and should not only be protected and appropriately maintained and enhanced but, where possible, interpreted and made accessible to promote understanding and enjoyment of our heritage to those living in or visiting the area.

Development and regeneration schemes should be sensitive to each area's character, heritage and features.



Historic buildings and heritage sites in Swansea

Grade I Listed Buildings	7
Grade II* Listed Buildings	35
Grade II Listed Buildings	476
Schedules Ancient Monuments	119
Registered Historic Parks and Gardens	11
Conservation Areas	31
Registered Archaeological Sites	3,050

Priority

Protect and promote historic buildings and heritage sites

INDICATOR:

- number of historic buildings and heritage sites interpreted

Links to Other Themes

Environment Strategy:

Natural Environment and Biodiversity

Building developments can have a negative impact on the natural environment and cause biodiversity loss but incorporating green space and habitat creation schemes within urban settings can help to support biodiversity and improve the aesthetic quality of the built environment for everyone's benefit.

Water, Land and Waste Management

The potential effects of climate change and future needs of society ought to be taken into account when planning where and how to build new developments and improve existing buildings. These could include alternative ways of dealing with water, waste and energy.

Sustainable Transport and Air Quality

Good transport links between and within communities are crucial but giving priority to pedestrians and cyclists and reducing dependency on car use can also benefit health and quality of life.

Environmental Awareness and Action

All new public and educational buildings can play a key role in demonstrating and encouraging good practice in design and resource efficiency.

Community Plan:

Health, Social Care and Well-being

Good health and well-being can be supported through the provision of affordable, high-quality housing in attractive, safe and people-friendly neighbourhoods with easy access to a range of essential services, community facilities and open spaces.

Learning

An understanding and appreciation of our heritage can help to foster a positive sense of community pride and distinctiveness. Schools, colleges and other learning centres can demonstrate and encourage good practice in resource-efficient design.

Prosperity

The appearance of our town centres and communities can have a major impact on attracting business and on the well-being of the workforce. The efficiency of buildings can help to reduce costs in the long term and opportunities are expanding for new businesses to develop in areas of energy, waste and resource management.

Community Safety

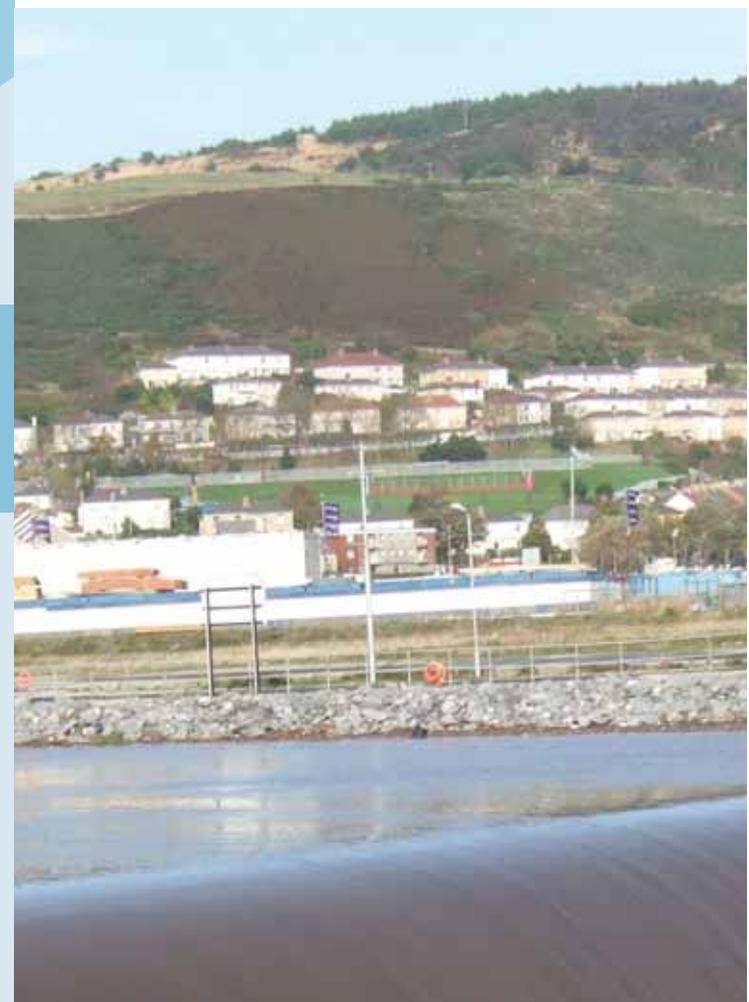
Community pride through participation in regeneration projects and environmental improvement schemes can help to reduce the inclination to and tolerance of vandalism, graffiti, littering and other anti-social behaviours. Streets, buildings and neighbourhoods can be designed to deter crime and increase the sense of security.

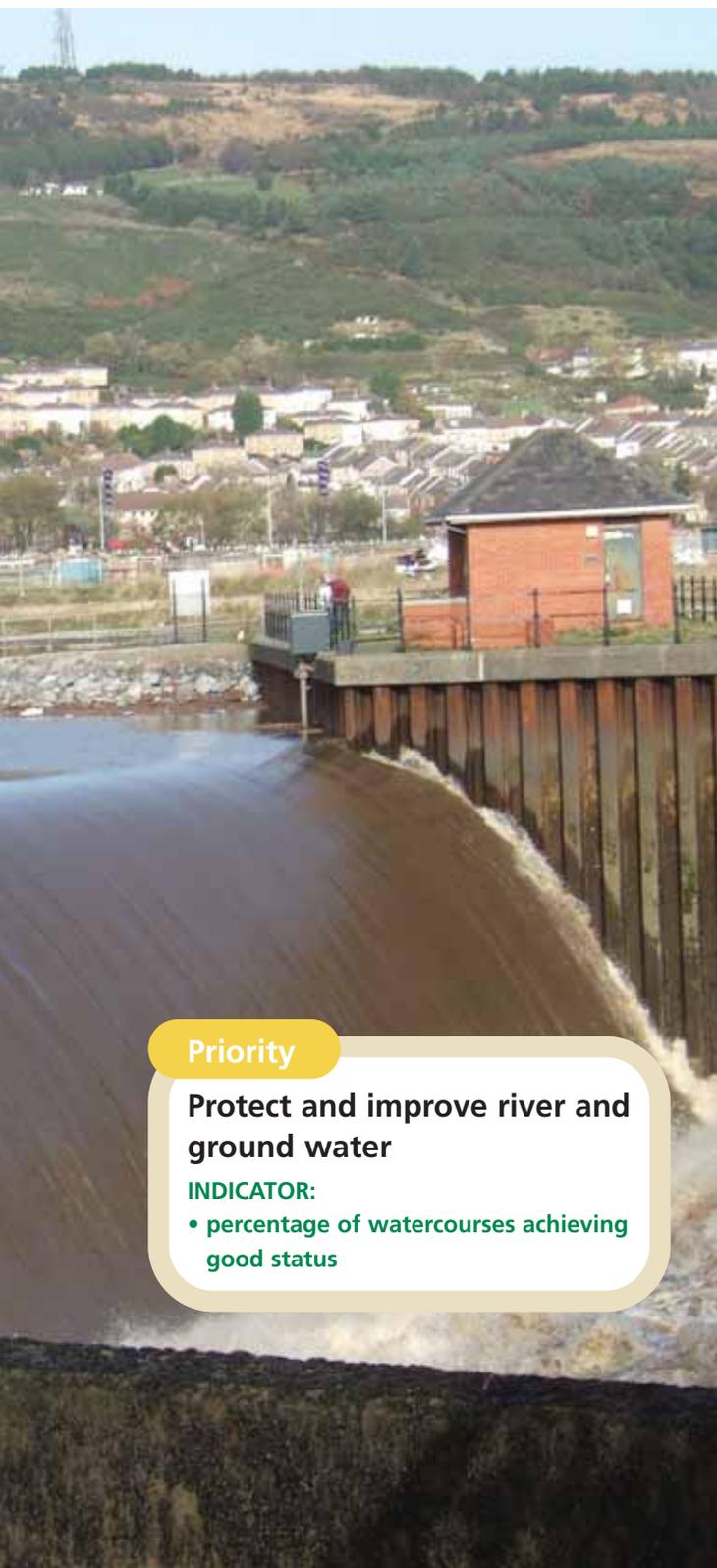
2020 vision: Swansea's water resources, land and waste will be managed sustainably to maximise benefits for everyone and minimise risks to the environment and human health.

We depend on natural resources such as clean air, water and land to meet our basic needs and ensure good health, to enable food production, to provide raw materials for building and manufacturing and to support recreation. Many human activities cause the depletion and degradation of these resources and economic growth has historically been linked to increased consumption of natural resources and the production of pollution and waste; this link needs to be broken.

Swansea's industrial past together with population growth has put pressure on natural resources but most of our watercourses, coastal waters and much contaminated land have been dramatically improved in recent years. However, more work is needed and we must continue to monitor and maintain vigilance against new sources of pollution. We must also prepare for the likely effects of climate change on water supply, flood risk and soil erosion.

Most manufacturing processes and the use of everyday materials inevitably create waste and unwanted by-products. If not dealt with effectively, these can have detrimental and long-term effects on our environment. We must find ways to use resources more efficiently, recover and reuse whatever we can and dispose of what is left safely and locally. Illegal waste disposal and fly-tipping are costly and dangerous practices and need to be eliminated.





Priority

Protect and improve river and ground water

INDICATOR:

- percentage of watercourses achieving good status

Water Quality and Water Use

It is easy for us to take water for granted when living in a county that is effectively surrounded by water, with major rivers to the north and east and the sea to the south, west and north-west. The supply and storage of water in Wales is currently sufficient and reliable enough to meet our demands most of the time, but the future is less certain. Climate change may affect the availability of water and make it more difficult to maintain supply all year round while at the same time maintaining water quality and protecting habitats that depend on water.

Swansea's wonderful freshwater systems and coastal waters have contributed to people wanting to visit, live and work in the area. Significant improvements to river and sea water quality over recent years with new wastewater treatment facilities and the redevelopment of the docks have contributed to improved fisheries and an increase in leisure opportunities.

Water is an essential resource for humans, wildlife and the wider environment. It sustains life and influences our lifestyle. We use water at home not only for drinking but for cooking, cleaning, watering the garden and disposing of our waste. It also plays an important role in many industrial, agricultural and commercial processes and supports a wide range of recreational activities.

Environment Agency Wales is working with stakeholders to produce a **Catchment Abstraction Management Strategy** (CAMS) to ensure the sustainable use of surface and ground waters in the Tawe, Loughor and Gower catchment areas.

How we use water, as with many other human activities can have huge impacts on both the supply and quality of water. We must find ways of using this essential resource more efficiently while minimising the risks of pollution. Raising public awareness about the importance of water efficiency may be crucial if affordable supply is to be maintained. The greater use of rainwater collection systems could make a useful contribution.

Public drinking water supplies in Swansea are of high quality and are well regulated, with regular sampling and high-quality compliance rates. Public concern is sometimes expressed about fluoridation of drinking water and a debate on this issue may be useful. The quality of private water supplies and bottled water are not always as high and new legislation may be necessary to ensure better control of these.

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Some of Swansea's beaches regularly attain the prestigious **Blue Flag** status but the water quality in Swansea Bay currently falls short of the EU Bathing Water Guideline Standards. Further work needs to be done to help us

Blue Flags Awards (2006)

Bracelet Bay	Caswell Bay
Langland Bay	Port Eynon
Swansea Marina	

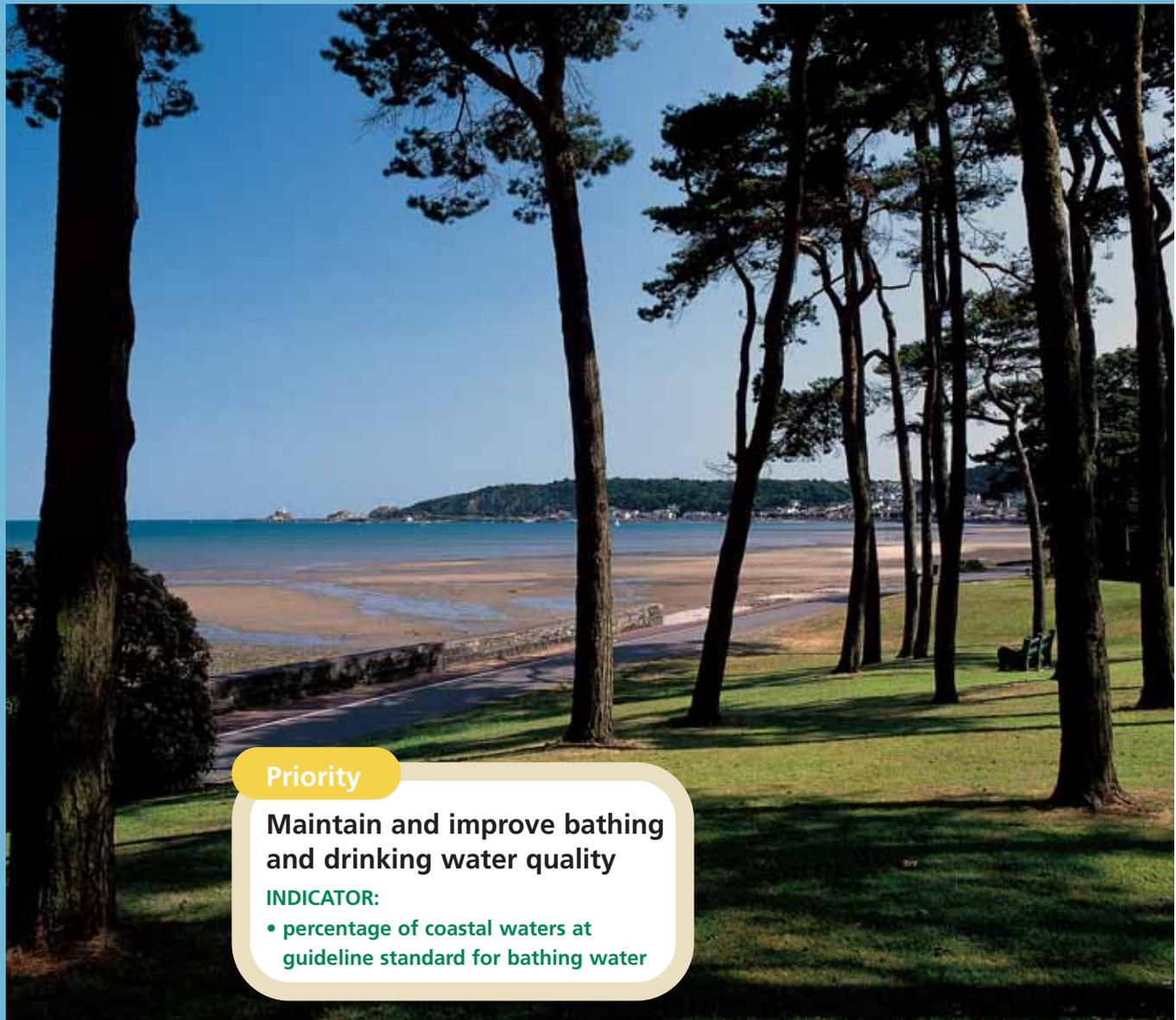
Green Coast Awards (2006)

Limeslade	Rhossili
Pwll Du	Tor Bay

understand the reasons for this and to implement long-term improvements. The quality of river water and other water-courses has an obvious impact on coastal water quality. Minewater discharge, a legacy of our industrial

past, has been largely remediated in Swansea's rivers, with the notable exception of Clyne Stream. Increased threats now come through **diffuse pollution** from agriculture and building developments and there has been a slight deterioration in the quality of Swansea's rivers over the last 5 years. The use of certain sheep dips is of particular concern, as is the number of misconnections and overall capacity in the drainage and sewerage systems.

Heavy rainfall can cause problems when untreated sewage overflows into rivers and coastal waters and it is anticipated that this may increase in the future as a result of climate change. The use of sustainable drainage systems and water reuse innovation, such as reed beds for water purification, could be promoted.



Priority

Maintain and improve bathing and drinking water quality

INDICATOR:

- percentage of coastal waters at guideline standard for bathing water



Flood Risk and Flood Defence

Most of the City and County of Swansea that is at risk of flooding is protected by defence systems that have been developed over many years. However, over 4,000 residential and commercial properties in Swansea are located in flood plains, with millions of pounds worth of assets at risk from flooding. Climate change is expected to have significant effects on rainfall patterns and sea level and this will put many more coastal and riverside communities and businesses at increased risk of flooding. Flood defences may need additional maintenance in some areas of higher risk such as the Lower Swansea Valley, Loughor Estuary and North Gower coast to ensure the flood risk to existing properties is minimised.

Reducing flood risk is not just simply about building strong defences, however. Employing 'soft engineering' solutions, such as wetlands creation and managed retreat schemes, may be more effective in the longer term. Above all, ensuring that new development is directed away from river and coastal flood plains is fundamental.

Increasing our understanding of flood risk and better modelling will make it easier to prepare

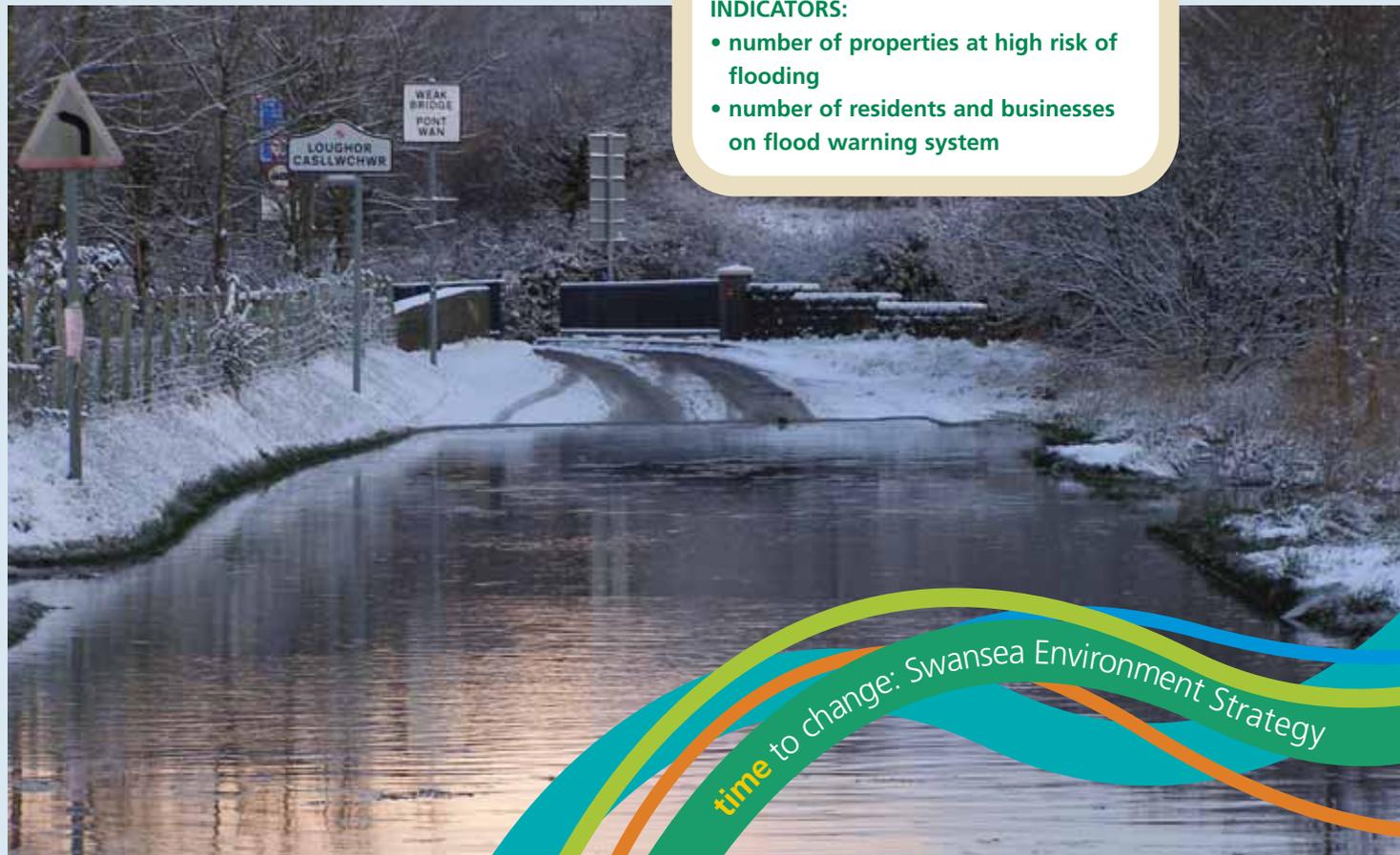
effectively. Improving the information given to householders and businesses that are at greater risk and encouraging involvement in the flood warning system are also important.

Priority

Restrict development on flood plains, reduce flood risk and improve flood awareness

INDICATORS:

- number of properties at high risk of flooding
- number of residents and businesses on flood warning system



Land and Mineral Resources

After 300 years of industrial activity, hundreds of hectares of land, particularly in the Lower Swansea Valley and docks area, were left contaminated with chemical and metal pollutants. Over recent decades, what was one of the most polluted areas in Europe has been reclaimed for commercial and recreational use. There is understandable pressure to return brownfield sites into residential or commercial use but this must be done in a way which ensures that public health risks are minimised and the cost of decontamination and appropriate disposal of harmful waste is taken into account. The surveying of contaminated sites needs to be completed and details made publicly available.

Building developments and poor agricultural practices can have detrimental effects on soil quality, and climate change may result in increased risk of erosion. Greater understanding is needed about how to manage soil effectively so that its quality and organic content can be protected and improved for future generations.

Minerals and aggregates are extracted from the land and seabed to support construction and some manufacturing processes but this can have adverse impacts on the environment and communities. These impacts require careful monitoring and control to ensure that resource



Priority

Restore contaminated land ensuring minimum risks to the environment and public health

INDICATOR:

- **area of contaminated land remaining in Swansea**

needs are balanced with the protection of marine and terrestrial habitats, coastlines and landscapes. Where there is doubt about the possible effects of mineral extraction, the **precautionary principle** should be applied.

Resource efficiency and the reuse of demolition materials and other wastes are important ways to reduce our dependency on quarrying or dredging for raw materials.

Waste Minimisation and Waste Management

The amount of waste recycled in Swansea has dramatically increased in the last few years from less than 5% to almost 25% and all households are now served by kerbside recycling schemes. Improving the way we deal with waste is not the only issue to consider; reducing the amount of waste we produce in the first place is the long-term solution. Household waste has been increasing each year so meeting national targets set for reducing it poses a major challenge. It will require fundamental lifestyle changes and more sustainable choices by everyone.

Aiming for **zero waste** is the long-term aspiration, which means designing out waste from products as much as possible and regarding all waste as a potential resource leaving a minimal amount for disposal. It is intended that the range of materials collected for reuse or recycling will be extended to include garden and kitchen waste and plastic packaging.

High participation is fundamental to making recycling schemes and reuse projects efficient and cost effective. As with most kerbside schemes operating in Wales, participation rates in Swansea are currently too low and it is estimated that less than half of what could be easily recycled is currently separated by householders for segregated collection.



Priority

Reduce waste going to landfill and increase reuse, recycling and composting

INDICATORS:

- average household waste arising
- percentage of municipal waste recycled or composted

34

When Swansea's main landfill site was closed in 2005, waste not recovered for recycling had to be transported for disposal in other parts of Wales, resulting in higher financial and environmental costs. Longer-term local or regional solutions must be found for disposing of all our waste which would limit the need for transportation and avoid passing the problem on to other communities. Greater awareness raising is needed which clearly links waste production to disposal costs and environmental concerns. It may also be necessary to explore ways to introduce incentives and enforcement schemes to encourage households to reduce waste and increase recycling.

Priority

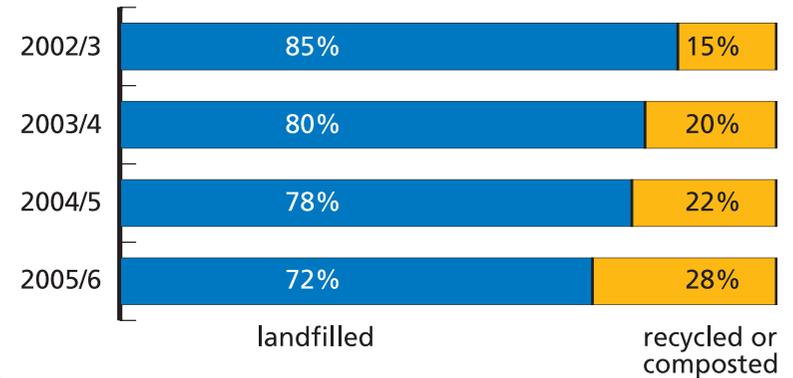
Identify suitable sites and sustainable technologies for dealing with waste



A network of civic amenity sites in Swansea offers householders the opportunity to dispose of many items which may be hazardous or bulky, including batteries, electrical equipment, garden waste and oil. Community-led projects, including charity shops, furniture reuse and composting schemes make important contributions to reducing waste in Swansea whilst also creating training and employment opportunities. Swansea Community Recycling Alliance and Partnership (SCRAP) involves community groups, the local authority and waste businesses in working together to promote sustainable waste management.

Although **Municipal waste** is of most concern in the context of this Strategy, it is not the only waste produced in Wales. The construction, agricultural and other industries create waste while making products for us to use. Business and industry can often

Changes in Disposal of Municipal Waste in Swansea



find ways to use resources more efficiently and, together with research organisations, have an important role to play in developing innovative ways to recycle materials and designing products with durability and end-of-use recovery in mind.

Householders and organisations can support sustainable waste management practices by choosing products that have recycled content, use less packaging and are easily repairable or recyclable. New building developments need to be designed with facilities to help occupants segregate their waste.

Fly-tipping and illegal disposal of waste is not just unsightly but can create risks to human health and wildlife and is costly to deal with. It is estimated that cleaning up after fly-tippers in Wales during 2003 cost £725,000. Positive steps need to be taken to prevent such action.

Links to Other Themes

Environment Strategy:

Natural Environment and Biodiversity

Water pollution, fly-tipping, littering, mineral extraction and poor waste disposal can all have detrimental effects on landscapes and wildlife. Improving water quality, limiting mineral extraction and waste control can reduce the negative impact on nature and human health.

Built Environment and Energy

The potential effects of climate change and future needs of society ought to be taken into account when planning where and how to build new developments and improvements to existing buildings. These could include alternative ways of dealing with water, waste and energy.

Sustainable Transport and Air Quality

Using motorised vehicles pollutes land, air and water and contributes to climate change. Reusing materials for the construction and maintenance of vehicles, highways, cycle tracks and footpaths can reduce the waste going to landfill and limit the need for extraction of new minerals.

Environmental Awareness and Action

The lifestyle choices and actions of individuals, communities and businesses can have a significant impact on the quality of our water and land, and on the way we create and manage waste. Greater awareness of the health, social, financial and long-term consequences of our actions can influence the choices we make.

Community Plan:

Health, Social Care and Well-being

Maintaining a high quality of drinking and bathing waters and dealing with contaminated land and waste effectively is crucial to good health. Avoiding developments in areas liable to flooding will avoid the serious consequences that may otherwise arise for people and properties.

Learning

Understanding how waste, litter and pollution affect the quality of our rivers, seas and land and the provision of clear and accurate information and guidance on issues such as water safety and waste management is important for both individuals and organisations.

Prosperity

The quality of our beaches and landscapes is crucial to the local tourism industry. Maintaining a clean environment, free from litter and pollution, can help attract visitors, workers and investment. Businesses should ensure compliance with legislation designed to protect the environment and resources. Many can save costs by managing resources and waste more efficiently, and can achieve a market edge in an increasingly aware global economy.

Community Safety

Poorly maintained waterways, disused land or buildings, litter, fly-tipping and abandoned vehicles can all present dangers to the environment and the public. Well-maintained waterways, reused derelict buildings and managed open land can all improve safety, and become community assets.

Sustainable Transport and Air Quality

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2020 vision: Swansea's citizens will live near to work opportunities, leisure facilities and essential services, have access to a choice of convenient, efficient and attractive transport options, and enjoy clean air.

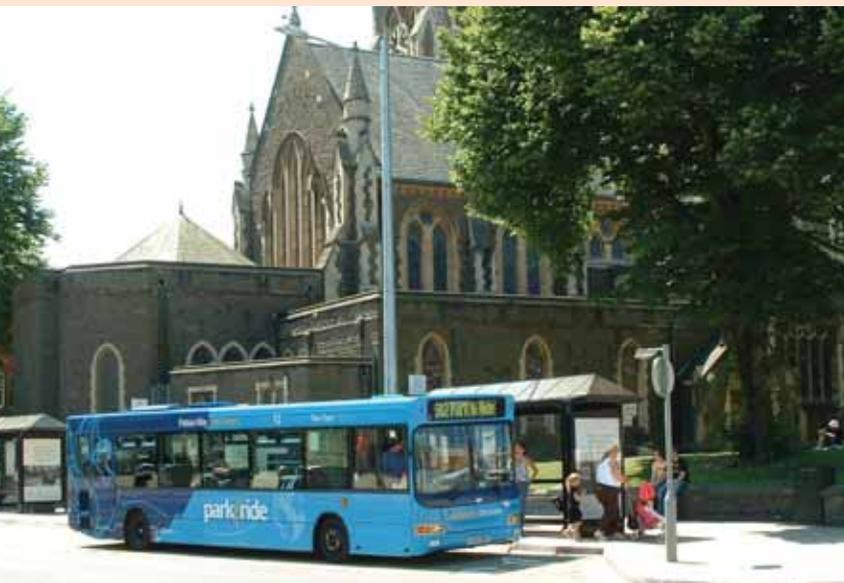
The last 20 years have seen a huge increase in car use in the UK, which has contributed to greater road congestion, poorer air quality and more noise. Transport emissions affect people's health and contribute to global warming and climate change. Some areas of Swansea have suffered from congestion problems for many years, which are compounded by topography and our coastal location.



Air pollution has greatly improved in Swansea over the last century with the reduction in heavy industry and the introduction of smokeless fuels. Transport is now the most significant threat to the quality of our air. Poor air quality not only affects our health but is also harmful to plants and animals, and causes damage to buildings.

Air travel is a growing contributor to pollution and climate change. Promoting a reduction in air travel and airport expansion, against the current trends, would help to limit its impact on the environment.

There are many ways in which people can travel more sustainably and limit their contribution to pollution and congestion, such as sharing cars, using public transport, cycling or walking. Fuel efficiency is generally improving and alternative fuels are being developed, but not at the same pace as the increase in vehicle use. The popularity of large and less-efficient vehicles has also slowed down the overall benefit of such developments. Reducing the distances and frequency people need to travel, in order to get to work and services for example, may lead to more significant improvements.





Sustainable Travel and Transport

We have seen several initiatives in Swansea in recent years that promote reduced car use or provide alternatives to the car. These include the introduction of two park and ride sites to the north-east and east of the city centre, with express bus routes, and developments to the area around the railway station to improve links

to bus and taxi services. There are proposals for two further park and ride facilities for the north-west and west and major improvements to the Quadrant bus station. The development of the innovative Swansea Metro streetcar scheme will provide fast and frequent services linking key sites along a well-used route.

A regional car sharing scheme has been established and an increasing number of businesses, schools and other organisations are producing travel plans to promote more sustainable travel options to staff, students and customers. The **Safe Routes to Schools** initiative has seen school travel plans developed and practical measures taken to encourage cycling and walking, and to reduce traffic speed and congestion around local schools. However, about half of all car journeys are still over very short distances.



To make alternatives to car use attractive, it is crucial that they are convenient, clean and safe. Physical improvements and promotional campaigns can help to overcome the reasons for non-use of public transport, cycling and walking, which can provide people with more opportunities for exercise and also lead to safer streets.

The introduction of tighter emission standards for vehicles has resulted in the removal of lead from petrol and a reduction in sulphur content. Technological advances have provided less-polluting fuels, more efficient vehicles and alternative energy sources such as biodiesel, which is currently being produced locally from used vegetable oil. These can have significant environmental benefits but are negated by far greater increases in traffic and the growing popularity of fuel-inefficient vehicles.

Many foodstuffs and consumer goods are transported great distances, often involving road transport and contributing to congestion and pollution. There may be benefits in encouraging businesses to seek more efficient distribution systems and source materials and services locally to support sustainability and the local economy and even make cost savings.



Priority

Promote more sustainable forms of travel and transport

INDICATORS:

- modal split on key routes into Swansea
- number using park and ride facilities



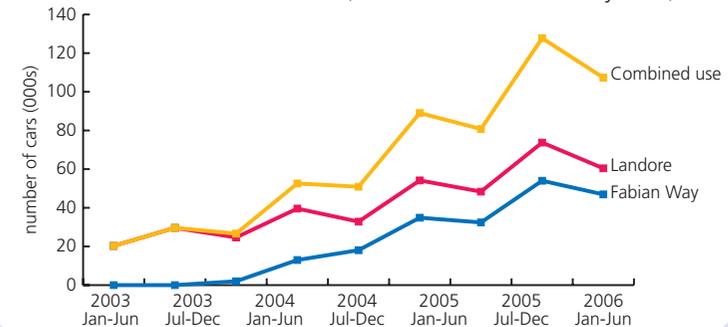
Accessibility and Transport

The increase in car ownership over the last few decades has seen the development of many out-of-town facilities and has significantly added to the distance people travel, resulting in more congestion and pollution.

The associated decrease in local shops and services has had particular impact on disadvantaged urban communities, where car ownership is often low, and on rural communities. People without cars can find it difficult not only to access shops but also other essential services such as learning and leisure facilities, work opportunities and health services. Public transport and community transport schemes can contribute to addressing these problems but to halt the decline in local facilities, residents also need to be encouraged to buy locally and support neighbourhood amenities where these are available.

It is important that essential services, public transport, cycle routes and footpaths are integrated into new developments and, where possible, into existing communities. It may be necessary to provide incentives to encourage developers to prioritise pedestrians and cyclists.

Increase in Park & Ride Use (Landore and Fabian Way sites)



Planning for transport and access to large events taking place in the area could include providing special bus services and ensuring access and storage facilities for cyclists.

Working from home is becoming more feasible and increasingly accepted, and is a good way to reduce the need to travel as well as bringing other social, economic and health benefits. Access to broadband and new technologies, more flexible working and cottage industries, particularly in rural areas, can help to reduce travel.

Priority

Improve access to services, workplaces and community facilities

INDICATOR:

- number of travel plans produced for public buildings and schools



Air Quality and Pollution

Clean air is a basic essential of life and poor air quality has a direct effect on our health, well-being and ability to work. The link between pollution and health such as respiratory problems, heart disease, asthma and strokes, has become increasingly clear over recent decades, particularly with children and older members of our community.

Reducing traffic congestion, and its associated poor air quality, in residential areas is a priority. Hafod is designated an **Air Quality Management Area (AQMA)** because the levels of NO₂, caused primarily by traffic, fail to meet the required standards. As a result, extensive monitoring of air pollutants takes place in this part of the Lower Swansea Valley.



Further data collection and research is needed so that the causes, distribution and effects of all forms of air pollution can be better understood. For example, levels of small particulates (such as PM10s) in the air in several areas across

Swansea are close to failing national target levels. Radon, a naturally occurring radioactive gas, is the second most significant cause of lung cancer in the UK but its impact varies greatly depending on local geology. More research is needed to identify where this may be a particular problem in Swansea.

Monitoring pollution and using modelling systems can help support the provision of better information to the public as well as more strategic actions to control it. One proposal is for a personal pollution-alerting system to be introduced that can inform people with

respiratory problems of poor air quality. A more responsive traffic management system for the Swansea Valley corridor, which takes into account air quality, is also being developed.

Priorities

Improve air quality and reduce air pollution

INDICATOR:

- number of days when air pollution is moderate or higher

Improve air quality monitoring and reporting mechanisms

INDICATOR:

- level of PM10s

Links to Other Themes

Environment Strategy:

Natural Environment and Biodiversity

Transport systems provide access to the natural environment but road developments can also contribute to habitat loss. Poor air quality, acid rain and climate change can put both human health and nature at risk.

Built Environment and Energy

Transport links between and within communities are very important but giving priority to pedestrians, cyclists and public transport, and reducing car dependency can benefit health and quality of life. New developments should reflect this priority and include good pedestrian access and provision for cycling.

Water, Land and Waste Management

Using motorised vehicles pollutes land, air and water and contributes to climate change. Reusing materials for the construction and maintenance of vehicles, highways, cycle tracks and footpaths can reduce the waste going to landfill and limit the need for extraction of new minerals.

Environmental Awareness and Action

It is important that people and businesses recognise the link between their contribution to congestion and pollution, as a result of transport choices, and the effects these have on their health and the health of family, friends and colleagues.

Community Plan:

Health, Social Care and Well-being

Avoiding car use for short journeys by cycling and walking to school, work and community facilities can benefit health by reducing pollution and providing opportunities for exercise.

Learning

Facilities that support walking or cycling to school and college can help to reduce the risks to health and safety that most students face from the daily 'school run'.

Prosperity

Car use and road building need to be decoupled from economic growth. Reviewing transport use, producing a travel plan and exploring alternative ways of working and transporting staff or products can help improve efficiency and the health and well-being of the workforce. Access to materials, workers and customers is as much to do with location as transport. For example, clustering of and collaboration between businesses can contribute to more efficient freight and distribution systems.

Community Safety

Prioritising for pedestrians and cyclists, and reducing road traffic, particularly in residential areas, around schools and near other community facilities, can reduce risks to health and safety. Improving vehicle safety and policing illegal vehicles, drivers and driving behaviour can significantly improve road safety.

2020 vision: All people living in, working in and visiting Swansea will understand, respect and appreciate our environment and will participate in positive actions towards sustainability.



Education, training and the provision of good information are key to achieving long-term change for the benefit of Swansea, its people and its environment. Environmental education is not however an end in itself but a means to an end; it is only effective if it inspires understanding and action towards a more sustainable future, providing both the knowledge and the desire to make a difference.

Education and awareness raising does not simply take place in schools and colleges; throughout our lives we have opportunities to increase our understanding and participate more fully in making our world a better place in which to live. We make choices every day about the way we live, what we eat, how we travel, what we buy and so on. Changes in our lifestyle can soon become an accepted part of everyday life and thus have a huge impact; for example, until recently very little household waste in Swansea was actually segregated for recycling or composting but within just a few years the amount has increased to over a quarter of the waste we produce (see graph on page 34).

It is not just individuals and households that can contribute to making Swansea more sustainable. Businesses and other organisations can assess the impact they have on the environment and introduce processes and management schemes that reduce waste and demonstrate care for the environment and

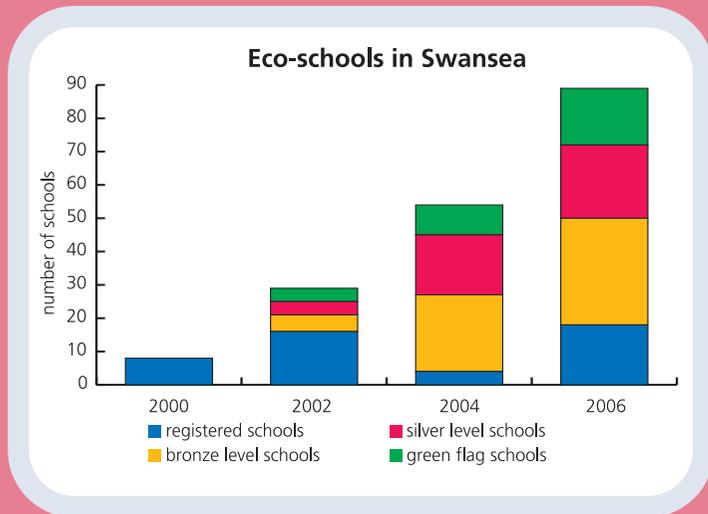
communities. Environmental improvements can often have financial benefits too.

Swansea benefits from having the Environment Centre and Swansea Environmental Education Forum (SEEF) which between them have provided a focus and impetus for environmental education, information and action in the area for over a decade.



Swansea Environmental Education Forum
Fforum Addysg yr Amgylchedd Abertawe

SEEF is an active network of over 40 local organisations that deliver and support environmental education and education for sustainable development throughout the City and County of Swansea. The Environment Centre and SEEF have successfully initiated a wide range of projects and services that help to raise awareness of environmental issues across different sectors of the community in both formal and informal settings.



Environmental Education and Schools

The provision of good quality environmental education in schools is extremely important because our school experiences can have a long-lasting affect on the way we choose to live our lives. Pupils can also influence the behaviour of peers, parents and other adults. Every child should leave school with a thorough understanding of environmental issues and feeling empowered to actively care for and improve the environment.

The National Curriculum in Wales offers many opportunities for environmental education and **education for sustainable development and global citizenship** (ESDGC). For more information on ESDGC refer to Appendix 6. It is likely that these aspects will be strengthened as the National Assembly reviews the National Curriculum in light of its overarching commitment to sustainable development.

At a local level, SEEF and its members provide many avenues of support for schools, with classroom activities, support for after school clubs, holiday projects, and involvement in programmes such as Crucial Crew, a scheme which provides all Year 6 pupils with learning about health, safety, the environment and citizenship. SEEF also sends regular mailings of information to schools, organises an annual teachers' evening and coordinates a programme of ESDGC training.

Schools should not just teach about the environment and sustainability but should also demonstrate good practice in the way they manage their resources and waste. **Eco-Schools** is a national programme, coordinated by Keep Wales Tidy, that promotes not only environmental awareness through curriculum-linked activities, but also positive changes in the management and decision-making processes of schools. There are currently almost 90 schools in Swansea participating in the programme and 17 have achieved the prestigious Green Flag. All Swansea schools should be encouraged to actively participate in both national and local schemes, such as Eco-Schools, Safe Routes to Schools (see page 38) and the Swansea Schools Recycling Initiative.



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Use of the environment as an outdoor classroom is an essential aspect of environmental education, providing first-hand experience through well-developed school grounds, and at field study centres and wildlife sites. There are several outdoor centres in the locality but a more coordinated approach to outdoor learning is needed to ensure that all local schools have the support needed to access local resources effectively and to improve the use of their own grounds. Innovative approaches to field work such as **Forest School** can develop important social skills as well as a greater appreciation and respect for the natural environment.

Schools can support community learning by providing a local venue for environmental awareness training and by engaging parents and others in learning activities and school development. For example, Family Learning Programmes, available in over 50 Swansea schools, support inter-generational learning and can include environmental issues.

Schools should also be encouraged to develop international links to enable real and long-lasting contacts to be developed with schools and communities in other parts of the world.



Priority

Encourage and support good practice in education for sustainable development and global citizenship in local education establishments

INDICATORS:

- number of Eco-School Green Flags
- number of SD course attendees

Further and Higher Education and Community Learning

The annual course directory produced by SEEF shows that the range of formal courses linked to the environment and sustainability that are available at Swansea's institutions of further and higher education are increasing. Students on some degree courses at both Swansea Institute of Higher Education and Swansea University can also access a module that introduces sustainability and links it to their main studies. A wide range of courses, talks and training on environmental themes are available through the University's Department of Adult Continuing Education with an option of gaining qualifications. CPD (continuing professional development) and induction training on sustainability has been developed for staff in local higher education institutions and could be extended to include staff of other organisations.



All educational institutions ought to act as good role models to students and the wider community by improving their impact on the environment through better resource management. Higher education can also contribute more widely to developing innovative solutions for sustainability through research projects. The Materials Engineering Department at the University, for example, has developed a

Recycling Technologies research degree which has already involved over 30 students in working with local business, industry and the local authority to improve the way waste is recovered and managed.

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Promoting Sustainable Lifestyles and Active Citizenship

Many environmental challenges can be tackled by individuals and organisations making relatively small changes to their behaviour so it is important that everyone can access clear and accurate information about the environment, their impact on it and how they can adopt more sustainable practices. The Environment Centre

provides a useful initial point of contact for environmental information and produces an informative free monthly newsletter that is distributed quite widely and posted on its website.

SEEF publishes an attractive annual environmental events leaflet to promote community learning and action through the many talks and activities linked to the environment that are organised by a wide range of local organisations.

SEEF also regularly brings together partners to present environmental issues to the general public at major events such as Swansea Show and the Gower Show, and to organise youth activities.

The way people shop is one of the most significant issues that determine the impact they have on the environment. Much of what we consume is transported from all around the world contributing significantly to environmental pollution and climate change.

Many modern and cheap convenience foods can be the result of intensive farming, involve mass processing and excessive packaging, and can also be nutritionally poor. It is widely considered more environmentally friendly and potentially healthier to buy food from local sources, such as local produce markets, or to grow food in allotments and gardens.

We often depend on the reliability of information and accurate labelling to help us determine the impact that a product has on the environment, for example, whether it uses recycled material or has been grown organically without the use of damaging chemicals.



The *Swansea Fairtrade Directory*, which lists shops and cafes that stock fairtrade products, is a good example of a useful local consumer guide. The *Swansea Green Map*, the first of its kind in Wales, also provides information on a wide range of local services, projects and sites that contribute to sustainability.

If access to information and educational materials relating to environmental issues and sustainability is to be made available to all Swansea residents, it has to be provided in a range of languages and formats.



Priorities

Actively promote sustainable living

INDICATOR:

- number attending environmental events

Promote active citizenship and increased participation in decision-making processes

INDICATOR:

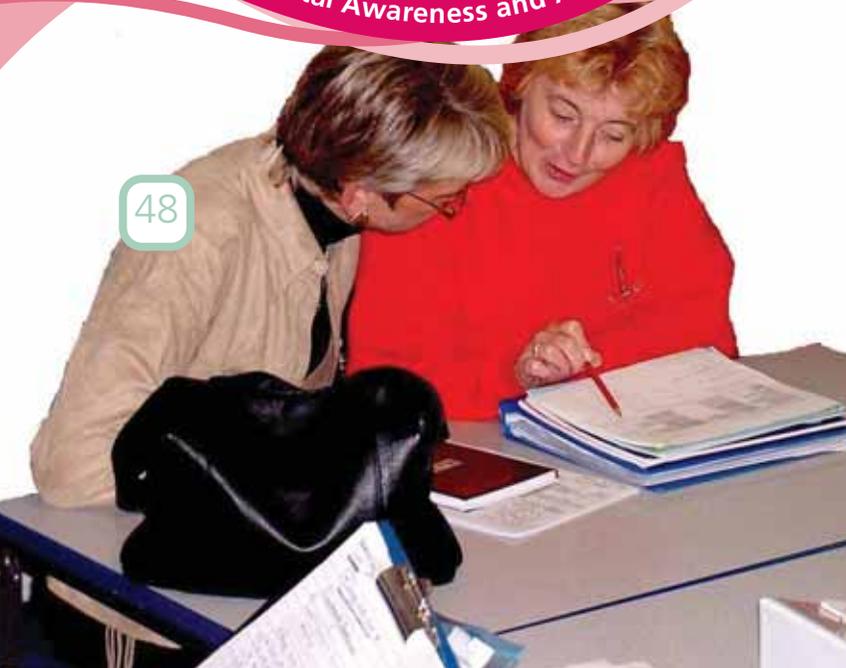
- number of volunteer hours in environmental projects

Community consultation and public engagement play a key role in building sustainable communities. All citizens in Swansea should be encouraged to get involved in decision-making processes, and take a more active role in determining the future of Swansea and its environment.

Citizenship is included in the school curriculum but opportunities need to be sought to help all members of our communities engage more fully. Community leaders and officials could be offered training in governance, consultation and sustainable development in order to support community engagement and active citizenship.

Active citizenship is also about volunteering and helping to build a strong civil society. Local environmental improvement schemes and conservation management projects can offer useful experiences to participants and help to cultivate community pride.





Sustainable Organisations and Businesses

Environmental Management Systems (EMS) are being increasingly adopted by businesses and other organisations to help them improve their impact on the environment and raise awareness amongst their staff about environmental issues. Many find that they can benefit from substantial cost savings and are able to attract business from a growing number of customers who demand environmental credentials, such as **Green Dragon Award**, a Welsh-specific EMS. In Swansea, 50 businesses and community organisations have already attained at least Green Dragon Level 2, with support from ARENA Network or Groundwork Wales.

Sourcing supplies locally is being promoted within the public sector through the Welsh Procurement Initiative, but local businesses too can be encouraged to consider this as part of their corporate social responsibility. Businesses and other organisations should be encouraged to adopt environmental policies and practices that not only support local and sustainable procurement but also encourage more sustainable transport, waste management, energy use and biodiversity.



Priority

Encourage good environmental practice amongst organisations and businesses

INDICATOR:

- number of Green Dragon Awards (level 2+) or other EMS

Private bodies seeking public funding are increasingly expected to demonstrate how they can contribute to sustainable development and minimise their environmental impact. As concern grows about environmental problems, businesses, including social enterprises, have increasing opportunities to provide environmental goods and services, and develop new technology and innovations to limit, mitigate or monitor the impacts of human activities.

Sustainable Swansea is an initiative that aims to promote the concept of sustainability through a trail of exemplar projects, the *Swansea Green Map* and an annual awards scheme. It brings deserved recognition to projects that already demonstrate good practice and offers support and training to communities and organisations wanting to develop new ideas. This initiative draws valuable links between education, communities and business.

Links to Other Themes

Environment Strategy:

Natural Environment and Biodiversity

Increasing our understanding of the natural environment, taking part in conservation projects and improving the environmental impact of our lifestyles can contribute to the protection of valued landscapes and biodiversity.

Built Environment and Energy

Educational buildings can play a key role in demonstrating and encouraging good practice in design and resource efficiency.

Water, Land and Waste Management

The lifestyle choices and actions of individuals, communities and businesses can have a significant impact on the quality of our water and land, and on the way we create and manage waste. Improving options and promoting awareness of the health, social, financial and long-term consequences of our actions can influence the choices we make.

Sustainable Transport and Air Quality

It is important that people and businesses recognise the link between their contribution to congestion and pollution, as a result of transport choices, and the effects these have on their health and the health of family, friends and colleagues.

Community Plan:

Health, Social Care and Well-being

Understanding the links between lifestyle, the environment and health can help people from an early age to make the right choices about travel, food, shopping, energy and waste disposal. Participation in environmental activities such as guided walks and volunteering in conservation projects has clear health benefits. Health and social care services often involve large organisations which can work to improve their own environmental impact.

Learning

Sustainability and citizenship are important aspects of both formal and informal education throughout our lives. Educational establishments can play a key role in demonstrating and encouraging good practice as well as teaching these issues.

Prosperity

Businesses that improve their environmental impact can benefit from cost savings, greater efficiency, community recognition and higher levels of satisfaction from employees and customers. Research and development into innovative, sustainable solutions can lead to many new business opportunities.

Community Safety

Greater awareness of our rights and responsibilities, participation in decision-making processes and positive responses from community leaders to complaints about anti-social behaviour, can foster civic pride and greater confidence. Involvement in local environmental improvement projects can also help to develop caring, inclusive and attractive communities where people feel valued and safe.

Communication, Consultation and Partnership

Communicating effectively with and involving a wide range of organisations and individuals in both the development and delivery of this Strategy is crucial to its success. See Appendix 3 for details of the consultation process.

Organisations were also invited to identify actions that they can undertake to contribute to achieving the agreed priorities. An action plan has been developed to accompany this Strategy with actions and milestones for the first two or three years. This will be monitored and renewed on a regular basis.

A summary document outlining the issues, visions and priorities of this Strategy has been produced for wider circulation. This includes ideas for personal and corporate actions and key contact information.

Swansea Environmental Forum is a membership organisation and encourages as many as possible to join the partnership and participate in consultations, meetings and other events.

Implementation of the Strategy will be undertaken by a wide range of organisations across the statutory, voluntary and business sectors over the next 10-15 years. This can only be carried out within the available funding,

and this Strategy will provide an important framework to underpin and support bids for additional funding to tackle the environmental priorities identified.





Monitoring Performance and Reporting Progress

The changing nature of the modern world and its impacts on the environment is such that our vision and priorities will need to be reviewed regularly. The Strategy is written with a 2020 vision but progress on many of the priorities is expected to be achieved within a much shorter period. It is important that Swansea Environmental Forum monitors the strategy's content and relevance, and is prepared to amend or update it as and when necessary.

Each of the five themed chapters includes proposed indicators to help monitor progress towards the priorities. Some of these will require new data collection arrangements but the majority are available through the existing work of partners. After the first year, it is hoped that a baseline for each indicator will have been established so that the rate of progress will be measured more easily in future years. The indicators are separately listed in Appendix 5.

Initially, it is intended that monitoring of the Strategy will take place on an annual basis and that a formal progress report will be produced and published every two years. This will take into account any progress that has been made, changes in relevant local, national and international policy and advances in knowledge



and technology that could affect the pace of change. Reporting on key achievements will also form part of community plan updates.

After the first two years, Swansea Environmental Forum will also review the frequency and form of future monitoring and reporting procedures. Ecological footprinting may also be adopted as the main measure of Swansea's overall environmental impact and be used to monitor progress towards a more sustainable City and County of Swansea.

Appendix 1: Glossary of Terms

Agri-environment schemes offer payments to farmers to help them safeguard landscape, wildlife, historic and public access features.

Air Quality Management Area (AQMA) designation is declared by a local authority if it considers that air quality in a particular area will fall short of set targets. An air quality action plan must be produced to address air quality causes within the designated areas.

Area of Outstanding Natural Beauty (AONB) is an area designated under national legislation for its distinctive landscape character and natural beauty. In landscape and planning terms AONBs have equal status to National Parks.

Authorised Street Promotion Scheme reduces fly-posting by providing public information points which include advertising space for promoting music, arts and entertainment.

Biodiversity is the variety of life on earth and includes plants, animals and micro-organisms and the wide range of habitats in which they live.

Blue Flag is an annual award for beaches and marinas that meet strict criteria for water quality, environmental management, information, safety and other services and facilities.



Brownfield sites are areas of land which have previously been developed but are now vacant, derelict or occupied by redundant or unused buildings. Sometimes these can become green spaces and are valuable for biodiversity.

Buildings Research Establishment Environmental Assessment Method (BREEAM) is used to assess the environmental performance of both new and existing buildings.

Catchment Abstraction Management Strategies (CAMS) are prepared by the Environment Agency to provide a consistent approach to managing water resources of a catchment and to facilitate public involvement in this process.

Climate change, in the context of this Strategy, refers to the changes in weather patterns on a global scale caused by the build up of man-made gases in the atmosphere that trap heat.

Combined heat and power (CHP) involves the recovery of heat from power generation to form useful energy or the production of electricity and heat in a single integrated plant.

Community plan is a local strategy that all local authorities in Wales are legally required to prepare in partnership with other organisations, to provide a long-term vision and action plan for supporting and strengthening the economic, social and environmental welfare of the area and promoting sustainable development.

Corporate social responsibility is an ethical obligation a company makes to the community in which it operates, not just to consider economic and legal issues in its decision making but to also take account of social and environmental issues in all its practices and policies.

Diffuse pollution is pollution which originates from many different locations, such as run-off from agricultural land or from urban areas into river catchments.

EcoHomes is an environmental rating which seeks to improve overall environmental performance of new and existing homes.

Ecological footprinting is a sustainability planning tool that can help measure what we consume and what the Earth is able to support based on the principle that everyone has the right to an equal share of the Earth's resources (Fair Earthshare) and that a proportion of land should be set aside for other species, rather than entirely for meeting human needs.

Eco-Schools is a national programme, coordinated by Keep Wales Tidy, that provides a framework for schools to develop their curriculum, school management and decision-making processes in support of environmental education and citizenship.

Education for sustainable development and global citizenship (ESDGC) involves people in gaining knowledge, values and skills needed to develop a more equitable, sustainable world where quality of life is improved for everyone without damaging the planet for the future.

Environmental management systems (EMS) are schemes that help organisations measure and improve their impact on the environment e.g. ISO 14001 and Green Dragon Award.

Environmental sustainability is about ensuring that the choices we make and the actions we take do not have detrimental effects on the environment's ongoing capacity to sustain life.

Fairtrade City status is awarded by the Fairtrade Foundation for reaching a target number of local shops, cafés and other establishments providing Fairtrade products.

Forest School is a programme for working with children and young people in the outdoors to help build self-esteem, social skills and independence.

Green Coast Awards are given to rural beaches that meet high water quality standards where the infrastructure requirements for a Blue Flag award would be inappropriate.

Green Dragon Award is a 5-stage environmental management standard developed in Wales.

Green Flag Awards are given by Keep Wales Tidy to schools that demonstrate a high achievement through the Eco-schools programme and are awarded by the Civic Trust to parks and open spaces that meet standards for accessibility and inclusiveness.

Green Pennant Awards are similar to the Civic Trust's Green Flags but are awarded to smaller, community-managed sites.

Heritage Coast is designated as having notable natural beauty or scientific significance, and managed to conserve its natural beauty and improve accessibility for visitors.

Integrated transport means linking together different forms of transport but is also about considering land-use, economic, environmental and social issues in transport planning.



LANDMAP (Landscape Assessment and Decision Making Process) is a national landscape information system which allows data about the physical, ecological, visual and sensory, historic and cultural influences on the landscape to be gathered, organised and evaluated.

Local Biodiversity Action Plans (LBAPs) set priorities for key habitats and species which are considered to be of local, national or international importance.

Local Environment Audit and Management System (LEAMS) is a street cleanliness monitoring tool that is administered and validated in Wales by Keep Wales Tidy.

Local Nature Reserves (LNRs) are designated and managed by the local authority for their nature conservation interest and because they are well suited to public access and education.

Municipal waste is household waste and other waste collected by the local authority including that from parks, beaches and some businesses.

National Nature Reserves (NNRs) are areas which represent the very best examples of UK wildlife habitats and geological features. In Wales, they are designated by CCW.

Precautionary principle means that the lack of full scientific certainty should not delay action to deal with threats of serious or irreversible damage to the environment.

Ramsar sites are wetlands of international importance designated under the Ramsar Convention.

Registered Landscapes of Outstanding Historic Importance were selected by Cadw and CCW as representing the most complete and best surviving historic landscapes in Wales.

Safe Routes to Schools is an initiative that involves taking practical steps to improve children's safety on the school journey and around the school by promoting walking and cycling.

Sites of Interest for Nature Conservation (SINCs) are non-statutory sites identified as being of local importance.

Site of Special Scientific Interest (SSSI) is the statutory designation for areas of land in the UK which have nationally important wildlife habitats, species and geological features.

Special Areas of Conservation (SAC) form part of the Natura 2000 series of wildlife sites of European importance, designated under the EC Habitats Directive (1992).

Special Protection Areas (SPAs) are strictly protected sites classified in accordance with the EC Birds Directive.

Social accounting enables an organisation to measure environmental and social, as well as economic, impacts and places a value on social and environmental benefits.

Standard Assessment Procedure (SAP) is the standard method for rating the energy efficiency of domestic buildings using a scale of 1-120.

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.

Techniums are specialist facilities set up to nurture new businesses and innovation with links to academic expertise and research.

Tir Gofal is an agri-environment scheme in Wales encouraging farming practices that protect and enhance landscapes and wildlife.

UN Millennium Development Goals are a set of 8 targets agreed by UN Member States for combating poverty, hunger, environmental degradation, etc. by 2015.

Welsh Housing Quality Standard (WHQS) sets a minimum standard for the physical condition of all housing in Wales. Social housing providers must meet this target by 2012.

Zero waste is the concept of minimising the amount of resources we use and ensuring that everything we design and produce can be repaired, reused or recycled.

Appendix 2: Bibliography of Strategies and Plans

Many existing and developing strategies and plans were consulted as part of the process of producing this Strategy. The first table lists local strategies and plans and the second table lists national plans. These are given in alphabetical order by author, starting with the most recent publications.

Local Strategies and Plans	Author	Date
Ambition is Critical, Making a Better Swansea (Community Plan)	Better Swansea Partnership	2004
Gower AONB Management Plan (consultation draft)	City and County of Swansea	2005
Lifelong Learning Strategy to 2010 (consultation draft)	City and County of Swansea	2005
Private Sector Empty Property Strategy 2005-2008	City and County of Swansea	2005
Swansea Contaminated Land Inspection Strategy	City and County of Swansea	2005
Better Service Better Performance Corporate Plan for 2004-2008	City and County of Swansea	2004
Hafod Air Quality Management Area Action Plan	City and County of Swansea	2004
Local Housing Strategy 2004-2009	City and County of Swansea	2004
Swansea Municipal Waste Management Strategy	City and County of Swansea	2004
Unitary Development Plan (consultation draft)	City and County of Swansea	2003
Local Transport Plan 2000-2005	City and County of Swansea	2000
Local Environment Agency Plan 2000-2005 Swansea and Llanelli Area Action Plan	Environment Agency Wales	2000
Safer Swansea Strategy 2002-2005	Safer Swansea Partnership	2002
Promoting Swansea's Natural Environment: Local Biodiversity Strategy and Action Plan (consultation draft)	Swansea Biodiversity Partnership	2005
City Centre Action Plan: Working together for Swansea 2005-2006	Swansea City Centre Partnership	2005
Swansea City Centre: Vitality, Attractiveness and Viability	Swansea City Centre Partnership	2004
Health, Social Care & Well-being Strategy 2005-2008	Swansea Local Health Board	2005

National Strategies and Plans	Author	Date
A Brighter Future for People and Nature	Countryside Council for Wales	2004
A Better Wales: Natural Environment of Wales in 2010	Countryside Council for Wales	2000
Working Together for Clean Air: UK Air Quality Strategy	Department for Environment, Food & Rural Affairs	2000
A Better Place? State of the Environment 2005	Environment Agency Wales	2005
Making Wales A Better Place: Plan 2005-2008	Environment Agency Wales	2005
A Living and Working Environment for Wales: The State of the Welsh Environment	Environment Agency Wales	2003
Creating a Better Wales 2006-2011	Environment Agency Wales	2006
Education for Sustainable Development and Global Citizenship: Curriculum and Qualifications Guidance	Qualifications Curriculum and Assessment Authority (ACCAC)	2002
Wales Environment Strategy	Welsh Assembly Government	2006
Our Environment, Our Future, Your Views: Wales Environment Strategy (consultation draft)	Welsh Assembly Government	2005
Technical Advice Note 8 - Renewable Energy	Welsh Assembly Government	2005
Energy Saving Wales: Energy Efficiency Action Plan	Welsh Assembly Government	2004
Interim Marine Aggregates Dredging Policy	Welsh Assembly Government	2004
People, Places, Futures: The Wales Spatial Plan	Welsh Assembly Government	2004
Technical Advice Note 15 - Development & Flood Risk	Welsh Assembly Government	2004
The Sustainable Development Action Plan 2004-2007	Welsh Assembly Government	2004
Better Homes for People in Wales: Action Plan	Welsh Assembly Government	2003
Wales: A Better Country (The Strategic Agenda for the Welsh Assembly Government)	Welsh Assembly Government	2003
Walking and Cycling Strategy for Wales	Welsh Assembly Government	2003
Technical Advice Note 12 - Design	Welsh Assembly Government	2002
Wise About Waste: Wales Waste Strategy	Welsh Assembly Government	2002
Better Homes for People in Wales: Housing Strategy for Wales	Welsh Assembly Government	2001
Technical Advice Note 21 - Waste	Welsh Assembly Government	2001
The Transport Framework for Wales	Welsh Assembly Government	2001
Minerals Planning Policy Wales	Welsh Assembly Government	2000
Technical Advice Note 5 - Nature Conservation & Planning	Welsh Assembly Government	1996
Learning to Work Differently - Sustainable Development	Welsh Development Agency	2001

Appendix 3: Environment Strategy Consultation

Over 250 people actively participated in the development of the Strategy through consultation events, forums or partnership meetings. Individual officers of several organisations and forums, with expertise on specific themes, played a very active role in preparing the Strategy at each stage.

A draft of this Strategy was available for public consultation from mid-February to mid-April 2006 and was circulated to well over 1,000 people. Comments and ideas were received from a variety of sources and taken into account during the redrafting process.

Presentations and discussions were held with the following:

Better Swansea Partnership
Better Swansea Alliance
CCS Environment Cabinet Advisory Committee
Glamorgan-Gwent Archaeological Trust
Swansea Bay Race Equality Council
Swansea Biodiversity Partnership
Swansea Churches Forum
Swansea Civic Society
Swansea Economic Regeneration Partnership
Swansea Environmental Education Forum (full forum, working group and FE/HE subgroup)
Swansea Environmental Forum
Swansea Health Alliance (prevention group)
Swansea Network 50+
Swansea Sustainable Building Design Forum
Swansea Transport Forum
Swansea Waste Forum
Swansea Young People's Partnership



Staff of the following were also consulted:

CCS (including waste management, sustainable development, pollution control, education, countryside, nature conservation, energy management, community safety, transport, housing, regeneration, community planning)
Countryside Council for Wales
Environment Agency Wales
Swansea Local Health Board
National Assembly for Wales (Environment)

Appendix 4: SEF Executive Committee Members

The Executive Committee of Swansea Environmental Forum is elected on an annual basis.

This table lists the members as at the start of September 2006.

Member	Position
Steve Brown	Environment Manager, Environment Agency Wales
Jenny Edwards	Assistant Manager, Environment Centre, Swansea
Deb Hill	Nature Conservation Team Leader, City and County of Swansea
Jake Griffiths	Swansea Business Environment Coordinator, ARENA Network
Roy Jones	Chairman, Swansea Friends of the Earth
Sian Jones	Property Manager, National Trust
John Llewellyn	Energy Manager, City and County of Swansea
Phil Marks	Regional Development Officer (South West Wales), Cylch
Elizabeth May	Environment Manager, Swansea Institute of Higher Education
Philip McDonnell	Environmental Consultant, PMDevelopments
Tanya Nash	Sustainable Development Manager, City and County of Swansea
Reena Owen	Director of Environment, City and County of Swansea
Phil Roberts	Director, Gwalia (Tai Cartrefi)
Terry Scales	Development Officer, Mumbles Development Trust
Kate Sinclair	Agency Support Coordinator, Housing Dpt, City and County of Swansea
Anne Sennett	External Relations Officer, Environment Agency Wales
Michael Whittaker	Transportation Strategy Officer, City and County of Swansea
Rebecca Wright	District Team Leader, Countryside Council for Wales



Appendix 5: Table of Indicators

Natural Environment and Biodiversity

- percentage of habitats mapped
- percentage loss of important Habitats
- total area of LNRs, AONB and SINCs
- percentage of SSSI features in or recovering towards favourable condition
- percentage area of green space managed for biodiversity
- number of Green Flags, Green Pennants and Green Coast Awards
- number of events in or about the natural environment
- length of easy-to-use footpaths and other rights of way

Built Environment and Energy

- percentage of brownfield sites/disused buildings remaining
- percentage cleanliness at high standard (LEAMS)
- percentage of public satisfaction with their local area
- SAP rating for City and County of Swansea
- number of EcoHomes and buildings with BREEAM standard
- proportion of social housing meeting WHQS
- proportion of properties vacant
- number of historic buildings and heritage sites interpreted

Water, Land and Waste Management

- percentage of watercourses achieving good status
- percentage of coastal waters at guideline standard for bathing water
- number of properties at high risk of flooding
- number of residents and businesses on flood warning system
- area of contaminated land remaining in Swansea
- average household waste arising
- percentage of municipal waste recycled or composted

Sustainable Transport and Air Quality

- modal split on key routes into Swansea
- number using park and ride facilities
- number of travel plans produced for public buildings and schools
- number of days when air pollution is moderate or higher
- level of PM10s

Environmental Awareness and Action

- number of Eco-School Green Flags
- number of SD course attendees
- number attending environmental events
- number of volunteer hours in environmental projects
- number of Green Dragon Awards (level 2+) or other EMS

Appendix 6: Education for Sustainable Development and Global Citizenship

Swansea Environmental Forum (SEF) and Swansea Environmental Education Forum (SEEF) are committed to supporting the development and provision of education for sustainable development and global citizenship in all schools, colleges, workplaces and communities in Swansea.

Education for Sustainable Development is defined as...

"...enabling people to develop the knowledge, values and skills to participate in decisions about the way we do things individually and collectively, both locally and globally, that will improve the quality of life now without damaging the planet for the future."

UK Panel for Education for Sustainable Development (1998)

Education for Global Citizenship is defined as...

"...enabling people to understand the global forces which shape their lives and to acquire the knowledge, skills and values that will equip them to participate in decision making, both locally and globally, which promotes a more equitable and sustainable world."

ESDGC Curriculum & Qualifications Guidance, ACCAC (2002)

These definitions have given rise to 9 key concepts for ESDGC:

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 basic needs and about human rights, and implications for future generations of actions taken today.

Diversity: understanding, respecting and valuing both human diversity (cultural, social and economic) and biodiversity.

Quality of Life: acknowledging that global equity and justice are essential elements of sustainability and that basic needs must be met universally.

Sustainable Change: understanding that resources are finite and that this has implications for people's lifestyles and for commerce and industry.

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, less and more economically developed parts of the world and appreciating 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 the promotion of harmony.

Appendix 7: UN Millennium Development Goals

In September 2000, at the United Nations Millennium Summit, world leaders agreed to a set of measurable targets for combating poverty, hunger, disease, illiteracy, environmental degradation and discrimination against women by 2015. These agreed targets are known as the Millennium Development Goals and have been endorsed by all UN Member States.

“Never before have such concrete goals been formally endorsed by rich and poor countries alike. Never before have the UN, the World Bank, the International Monetary Fund and all the other principal arms of the international system come together behind the same set of development objectives and stood ready to be held accountable.”

Kofi Annan,
UN Secretary-General (2005)

In 2005, the City and County of Swansea joined with the United Cities and Local Governments (UCLG) organisation to declare its support for these goals.



The eight Millennium Development Goals are:

- Goal 1:** Eradicate extreme poverty and hunger
- Goal 2:** Achieve universal primary education
- Goal 3:** Promote gender equality and empower women
- Goal 4:** Reduce child mortality
- Goal 5:** Improve maternal health
- Goal 6:** Combat HIV/AIDS, malaria and other diseases
- Goal 7:** Ensure environmental sustainability
- Goal 8:** Develop a global partnership for development





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