APPENDIX 1 – Review of policies, plans and programmes

Please note that this is a working document and will be updated periodically

A summary of the key objectives and issues arising from the PPP review is presented for each of the proposed SEA topic areas and are ordered by international, EU, national, regional and local relevance. Any new or updated policies, plans or programmes will be added throughout the SA process.

Topics:

- Population and human health
- Education and skills
- Transport
- Social Fabric
- Economy
- Climatic factors
- Air quality
- Material Assets
- Water
- Soil
- · Biodiversity, Fauna and Flora
- Cultural Heritage
- Landscape
- Others sustainable development, planning
- Pembrokeshire planning and supplementary planning guidance
- Neighbouring authorities planning and supplementary planning guidance

PPPs have been categorised by colour: Topics, International, National, Local, Plans & Policy titles

Welsh Government

Well-being of Future Generations (Wales) Act (2015)

https://gov.wales/topics/people-and-communities/people/future-generations-act/?lang=en

Well-being Plan for Pembrokeshire (2018)

https://www.pembrokeshire.gov.uk/public-services-board/well-being-plan

The act applies to all of topic areas outlined above due to the wide ranging and holistic approach to the legislation. The act created Public Service Boards (PSB) in each County Council area in Wales which comprises 15 statutory organisations across the public and private sector. The PSB has a statutory duty to produce a Well-being Plan to set out how Pembrokeshire County Council will improve communities and the lives of people living in the county now and in the future.

| Objectives and requirements | Implications for the LDP |
|--|---|
| The act sets out the seven goals that public bodies must achieve, which are as follows: 1. A prosperous Wales 2. A resilient Wales 3. A healthier Wales 4. A more equal Wales 5. A Wales of cohesive communities 6. A Wales of vibrant culture and Welsh language | The LDP should be produced using the five ways of working and contribute to the seven goals at every stage of the LDP process Affected issues: all |
| 7. A globally responsible Wales The five way of working to these goals are: | |
| Long-term Integration Involvement Collaboration | |
| 5. Prevention | |

Environment (Wales) Act 2016

https://gov.wales/topics/environmentcountryside/consmanagement/natural-resources-management/environment-act/?lang=en

The Environment (Wales) Act puts in place the legislation needed to plan and manage Wales' natural resources in a more proactive, sustainable and joined-up way.

Objectives and requirements

Part 1: Sustainable management of natural resources – enables Wales' resources to be managed in a more proactive, sustainable and joined-up way. It also helps to tackle the challenges we face and is focused on the opportunities our resources provide.

- Part 2: Climate change provides the Welsh Ministers with powers to put in place statutory emission reduction targets, including at least an 80% reduction in emissions by 2050 and carbon budgeting to support their delivery. This is vital within the context of our existing UK and EU obligations and sets a clear pathway for decarbonisation. It also provides certainty and clarity for business and investment.
- Part 3: Charges for carrier bags extends the Welsh Ministers' powers so that they
 may set a charge for other types of carrier bags such as bags for life. It also places a
 duty on retailers to donate the net proceeds from the sale of carrier bags to good
 causes.
- Part 4: Collection and disposal of waste improves waste management processes by helping us achieve higher levels of business waste recycling, better food waste treatment and increased energy recovery. This will help to decrease pressure on natural resources while also contributing towards positive results for both the economy and the environment.
- Parts 5 & 6: Fisheries for shellfish and marine licensing clarifies the law in relation to shellfisheries management and marine licensing.
- Part 7: Flood & Coastal Erosion Committee and land drainage clarifies the law for other environmental regulatory regimes including flood risk management and land drainage.

Implications for the LDP

The LDP will need to have regard for our natural resources and accord with the legislation.

Affected issues: all

Planning (Wales) Act 2015

https://gov.wales/topics/planning/legislation/planning-wales-act-2015/?lang=er

The act marks the divergence of the planning system in Wales away from the system in England, and puts in place legislative changes to deliver reform of the planning system in Wales, to ensure that it is fair, resilient and enables development.

| Objectives and requirements | Implications for the LDP |
|--|---|
| The act will: understand support delivery of the homes, jobs and infrastructure that Wales requires provide opportunities to protect and enhance our most important built and natural environments support the use of the Welsh language. | The LDP will need to comply with the legislation. Affected issues: all |

Population and human health

INTERNATIONAL/EU

European Spatial Development Perspective (1999)

http://ec.europa.eu/regional_policy/sources/docoffic/official/reports/som_en.htm

The Pan-European programme on transport, health and environment (THE PEP)

https://www.unece.org/trans/theme_pep.html

The PEP is jointly managed by WHO/Europe and UN ECE. It provides the current policy framework for transport, health and environment. Adopted in 2002 by country representatives from the three sectors, it streamlines and consolidates WHO and UNECE activities on transport, the environment and health and establishes a new intergovernmental body in which these three sectors are equally represented.

| Objectives and requirements | Implications for the LDP |
|--|--|
| The PEP has the following objectives: Integration of environmental and health aspects into transport policy | The LDP should support the PEP by considering the interrelationships between health, transport and the environment. The Community Plan will include priorities from the Regional Transport Plan. This, in turn, reflects many of the objectives of the PEP. Affected issues: human health, transport, air quality |
| Further development, implementation and monitoring of national strategies or action plans for transport sustainable for health and the environment. | |
| Define and adopt environment and health targets, identification of indicators for monitoring of the implementation and of impacts, development of reporting mechanisms. | |
| Dissemination of information, good practices and capacity building. | |
| Development of institutional mechanisms for integration of the environment and health concerns into transport policies, with participation of health and environment sectors representatives in the decision making process at different levels. | |
| Development and implementation of administrative, regulatory and financial | |

instruments in the NIS/CEEC to stimulate and enforce the production and use of vehicles and fuels with improved environmental and safety performance

- Demand side management and modal shift
- Elaboration of investment strategies influencing modal split towards sustainable transport.
- Development of measures influencing the modal split towards modes of transport, which are sustainable for health and the environment for both freight and passenger transport.
- Promotion of the elaboration of sustainable transport plans e.g. by large private and public enterprises as well as other organizations for both passenger and freight transport.
- Promotion, implementation and review of policies designed to internalize the health and environmental externalities (external costs) generated by transport activities.
- Improving driver behaviour through large-scale introduction of "eco-driving" programmes, in-car feedback instruments, traffic management measures and measures to ensure respect for existing speed limits.

Urban transport

- Establishment of a framework for the elaboration and implementation of urban plans for transport sustainable for health and the environment by agglomerations (urban and suburban) beyond a defined size.
- Further development of a common set of indicators for urban transport.
- Development of measures for promoting high quality and integrated public transport and reducing the need for, and volume of, car traffic.
- Development of measures for promoting and improving safe conditions of cycling and walking.
- Special care for groups at high risk, in particular children.

UK/NATIONAL

Strategic Equality Plan and Equality Objectives 2016–2020 (Wales) (2016)

https://gov.wales/topics/people-and-communities/equality-diversity/equality-objectives/?lang=en

The equality plan seeks to put equality and inclusion at the start of all policy making.

| Objectives and requirements | Implications for the LDP |
|--|---|
| Put the needs of people with protected characteristics and the centre of the design and delivery of public services; | The LDP should ensure that all objectives are met are adhered to. |
| Ensure provision of information and advice is available to those with protected characteristics; | Affected issues: population, social fabric |
| Identify and reduce the causes of employment, skills and pay inequalities; | |
| Reduce the incidence of all forms of harassment and abuse; | |
| Deliver a more diverse pool of decision-makers in public life; | |
| Strengthen community cohesion; | |
| Reduce poverty; and | |
| Welsh Government will aim to be an exemplar in the Equality, Diversity and Inclusion | |
| agenda by 2020. | |

People, Places, Futures - The Wales Spatial Plan (WSP) (2004)

Wales Spatial Plan Update (2008)

The WSP provides high-level strategic guidance in relation to spatial planning. In particular, it seeks to address challenges associated with demographic change, accessibility and the distribution of resources. It outlines issues and opportunities to be addressed over the next 20 years in order to plan and maintain balanced and sustainable communities.

The vision for the Pembrokeshire Haven area of the Wales Spatial Plan is: Strong communities supported by a sustainable economy based on

the area's unique environment, maritime access and tourism opportunities.

The WSP is due to be replaced by the National Development Framework by 2019.

Objectives and requirements Implications for the LDP The requirements within the spatial plan include: To support the WSP, the LDP should seek to promote sustainable communities and take into Building sustainable communities (for example by ensuring good access to local account the interrelationships between services and by enabling people to make healthy life choices); demographic change, geography, accessibility, Promoting a sustainable economy (for example by seeking to achieve reliable local distinctiveness and the environment. The transport and high speed internet routes necessary for trade): Community Plan will link closely with the WSP and will share many of its priorities, especially Valuing our environment (for example by comprehensively managing the environment for economic development. to maintain soil carbon, reduce contamination, manage diffuse pollution sources to water, protecting landscapes, enhancing habitats and minimising waste: The LDP will also need to take account of the Achieving sustainable accessibility (for example through improving north-south links NDF, which will replace the WSP in 2019. within Wales, investing in public transport, ensuring major retail development takes into account integrated transport opportunities and increasing levels of walking and Affected issues: Population, material assets, cycling through promotion and provision of facilities); human health, biodiversity, soil, water, cultural

The National Development Framework – Consultation: Issues, Options and Preferred Option (April 2018)

https://gov.wales/topics/planning/national-development-framework-for-wales/?lang=en

Respecting distinctiveness (retaining sense of place, promoting social cohesion).

The National Development Framework is set to replace the Wales Spatial Plan in 2020. The NDF is currently at stage 4 –preferred option.

| Objectives and requirements | Implications for the LDP |
|--|---|
| The NDF is at the early stages of plan preparation and has no defined objectives. The objectives are due to be set following the current consultation on preferred option running from April 2018 to July 2018 | The LDP must take account of the emerging NDF, particularly through the latter stages in 2019 when a draft version will be available. |

heritage, geological heritage and landscape.

Affected issues: Population, material assets, human health, biodiversity, soil, water, cultural heritage, geological heritage and landscape.

Partnership for Growth: strategy for tourism 2013-2020 (WG) (2013)

https://gov.wales/topics/culture-tourism-sport/tourism/partnership-for-growth-strategy/?lang=en

The strategy replaces Achieving Our Potential from 2000 to 2013. The new version (*Partnership for Growth*) is a strategy for the Welsh tourist sector and is not limited to WG alone. It set out five priority areas for action: promoting the brand, product development, people development, profitable Performance and place Building. The strategy is underpinned by a detailed action plan for years 1 to 3.

| Objectives and requirements | Implications for the LDP |
|--------------------------------------|---|
| The strategy focuses on 5 key areas: | The LDP should aim to contribute to the |
| promoting the brand | strategy by setting appropriate measures and objectives, such as promoting more sustainable transport options for the tourism industry and tourism sites. |
| product development | |
| people development | |
| profitable performance | Affected issue: Population, climatic factors, economy and cultural heritage and historic environment and landscape |
| place building. | |

Rural Development Plan 2014-2020: Next Steps, Welsh Government (2013)

https://gov.wales/topics/environmentcountryside/farmingandcountryside/cap/ruraldevelopment/wales-rural-development-programme-2014-2020/?lang=en

The Rural Development Programme was adopted by the European Commission in May 2015. It aims to fund projects that align with one or more of the European Rural Development Priorities which are as follows:

- fostering knowledge transfer and innovation in agriculture, forestry, and rural areas
- enhancing farm viability, competitiveness, promoting innovative farm technologies and the sustainable management of forests

- promoting food chain organisation, including processing and marketing of agricultural products, animal welfare and risk management in agriculture
- restoring, preserving and enhancing ecosystems related to agriculture and forestry
- promoting resource efficiency and supporting the shift towards a low carbon and climate resilient economy in agriculture, food and forestry sectors
- promoting social inclusion, poverty reduction and economic development in rural areas.

| Objectives and requirements | Implications for the LDP |
|--|--|
| The programme supports a wide range of activities which contribute to the following objectives: | The projects that are likely to be funded through the Rural Development Plan in Pembrokeshire include ones to strengthen the role of |
| fostering the competitiveness of agriculture ensuring the sustainable management of natural resources, and climate action | communities. Affected issues: economy, population, material assets, social fabric |
| achieving a balanced territorial development of rural economies and communities | |
| including the creation and maintenance of employment. | , |

Health Challenge Wales (2004)

http://www.healthchallengewales.org/home

Health Challenge Wales was a call by the National Assembly for Wales to people and organisations to work together for a healthier nation. Greater emphasis placed on preventing ill health in the first place, which will in turn free up our health service to treat unavoidable disease. It recognises that a wide range of factors – economic, social and environmental – have an impact on health, so that action in all these areas can help create a healthier nation. The campaign was launched in 2004, but is still actively marketed.

| Objectives and requirements | Implications for the LDP |
|--|--|
| Well Being in Wales requires an intersectoral, cross-policy approach to improving health and well-being in Wales. It addresses how strategies relating to various policy areas, for example transport and environment may also have implications for human health. | In response to Well Being in Wales the LDP should consider those areas of planning which are relevant to human health. |

The objective of *Health Challenge Wales* is to improve health within Wales. This requires consideration of the following health-related themes: Smoking; Food and fitness; Accidents and injuries; Alcohol and other substance misuse; Infections and Mental health and wellbeing. Ensure that work towards improving health and well being links with the health, social care, and well-being strategy.

To respond to *Health Challenge Wales*, the LDP should consider those aspects of human health that may be related to planning. Particularly to encourage fitness and healthy lifestyles, for example encouraging walking or cycling; which can improve mental health and well-being; and also to widen community access to facilities and open space.

The local delivery of Health Challenge Wales is being taken forward by *Health Challenge Pembrokeshire*.

Affected issues: Human health and well being

Social Services and Wellbeing (Wales) Act 2014

https://gov.wales/topics/health/socialcare/act/?lang=en

Hywel Dda - Our Big NHS Change (2018)

<u> http://www.wales.nhs.uk/sitesplus/862/page/95325</u>

The Social Services and Wellbeing (Wales) act puts a duty on each local health board in Wales to produce area plans setting out the range and level of services that will be provided in their area in response to regional Population Assessments. The West Wales Area Plan for 2018-23, 'Delivering Change Together', has been agreed by the Regional Partnership Board and endorsed by Carmarthenshire, Ceredigion and Pembrokeshire County Councils and Hywel Dda University Health Board. The plan has resulted in public consultation to change the current provision to suit the demands within the area.

| Objectives and requirements | Implications for the LDP |
|---|---|
| The local health board has met the requirements set out in the Social Services and Wellbeing (Wales) Act 2014 and is now focussed on public consultation to achieve these changes. The main implication is the downgrading of the three current general hospitals across South-West Wales and the construction of a new all-purpose hospital between Narberth and St. Clears. | Need to work closely with Hywel Dda to find a suitable site for the new South-West Wales hospital between Narberth and St. Clears. Affected issues: health and well being, material assets |

Active Travel (Wales) Act 2013

http://www.legislation.gov.uk/anaw/2013/7/contents/enacted

The Welsh Government has produced legislation, which aims to improve provisions for cycling and walking to decrease the use of fossil fuel based travel for short journeys. The act required each local highway authority to produce existing active travel maps and an action plan with aspirational active travel improvements. The Welsh Government awarded £8.1m to local authorities to enact their plans.

| 0 | ojectives and requirements | Implications for the LDP |
|----|--|---|
| • | To make walking and cycling the preferred method of travel for shorter journeys. | The LDP should safeguard any proposed active travel routes. |
| Tł | e legislation requires local highway authorities: | Affected issues: human health, population, air |
| • | To produce existing active travel maps for each settlement with a population greater than 2000. | quality, climatic factors, transport |
| • | To produce active travel plans that improve on the current provisions, namely, to extend the coverage of shared use paths. | |

Road Safety Strategy for Wales (2003)

https://beta.gov.wales/road-safety-framework-wales

SUSTRANS – Safe Routes to Schools

http://www.sustrans.org.uk/sites/default/files/documents/srs_safe_routes_fs01.pdf

SUSTRANS is a charity which aims to improve infrastructure for cycling across the UK. The aims of safe routes to schools initiative is now encapsulated by the active travel legislation in Wales.

The Strategy for Older People in Wales 2013-2023 (2013)

https://gov.wales/topics/health/publications/socialcare/strategies/older/?lang=en

This document outlines the Wales Strategy for addressing issues related to the general aging of the Welsh population, and is based on the UN Principles for Older Persons (namely; independence, participation, care, self fulfilment and dignity).

Objectives and requirements

The four strategic aims of the Strategy for Older People in Wales are:

- to create a Wales where full participation is within the reach of all older people and their contribution is recognised and valued;
- to develop communities that are age-friendly while ensuring older people have the resources they need to live;
- to ensure that future generations of older people are well equipped for later life by encouraging recognition of the changes and demands that may be faced and taking action early in preparation.

Implications for the LDP

The LDP should have regard to the issues related to the general aging of the local population, including consideration in the provision, location and accessibility of services and facilities. Issues extend well beyond health and social care issues and include age discrimination.

Affected issues: health and well being, Population, social fabric

Fuel poverty strategy (Wales) (2010)

https://gov.wales/topics/environmentcountryside/energy/fuelpoverty/strategy/?lang=en

Welsh Health Specialised Services Committee

http://www.whssc.wales.nhs.uk/policies-and-procedures

Climbing Higher-Next Steps: The Welsh Assembly Government Strategy for Sport & Physical Activity (2006)

<u> https://gov.wales/topics/culture-tourism-sport/sportandactiverecreation/climbing-higher/?lang=er</u>

This is the Welsh Government's long-term strategy for sport and physical activity, setting out its strategic direction in Wales for the next twenty years. The purpose of this strategy, which complements other WG actions and policies, is that within 20 years' sport and physical activity will be at the heart of Welsh life and at the heart of Government policy. Having published the strategy in 2005, the 2006 update (next steps) targets areas for investment.

Objectives and requirements Implications for the LDP The priorities are summarised as: The LDP can help with the provision of recreation facilities and play areas and ensure development and services are accessible by Wales needs to be more physically active in order to be a healthier nation; foot. Encouraging exercise is one of the key Wales needs healthy citizens in order to deliver long-term prosperity; priorities of Health Challenge Pembrokeshire Wales needs to maximise the synergy between sport, physical activity and the natural and this is also reflected in the Wellbeing Plan environment; given its importance for maintaining and Wales needs its people to be more 'physically literate'; improving physical and mental health. Wales needs more physically active communities; and As well as the success of individuals. Wales needs systematic and sustainable Affected issues: health and well being, success in priority sports. economy, social fabric

Creating an active Wales

https://gov.wales/topics/health/improvement/physical/active/?lang=en

Technical Advice Note (TAN) 16: Sport, Recreation and Open Space (2009)

https://gov.wales/topics/planning/policy/tans/tan16e/?lang=en

The TAN provides advice for communities, developers and local planning authorities in Wales preparing local development plans and taking decisions about planning applications. Local Planning Authorities are required to provide a framework for well-located sport, recreation and leisure facilities which should be sensitive to the needs of users, attractive, well designed, well maintained, safe and accessible to all.

| Objectives and requirements | Implications for the LDP |
|--|--|
| For LDP policies to be informed by audits of existing provision and need for open space in communities. These should form an Open Space assessment, which can be developed into an Open Space Strategy in conjunction with other sections of the local authority, with stakeholders and communities. | recreation facilities with interests of nature |

Regional/Local

Health Challenge Pembrokeshire. The Health, Social Care and Well-being Strategy (2008 - 2011)

http://www.healthchallengepembrokeshire.co.uk/

Pembrokeshire Advance - Sir Benfro Ymlaen Rural Development Plan (2007-2013)

https://www.pembrokeshire.gov.uk/rural-development-plan

Pembrokeshire County Council Community Safety Strategy (2002 - 2005)

https://www.pembrokeshire.gov.uk/safer-pembrokeshire

EU Directive 2002/49/EC relating to the assessment and management of environmental noise - The Environmental Noise Directive (EU, 2002)

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32002L0049

Technical Advice Note (TAN) 11: Noise (1997)

https://gov.wales/topics/planning/policy/tans/tan11/?lang=en

This note provides advice on how the planning system can be used to minimise the adverse impact of noise without placing unreasonable restrictions on development or adding unduly to the costs and administrative burdens of business. It outlines some of the main considerations which local planning authorities should take into account in drawing-up development plan policies and when determining planning applications for development which will either generate noise or be exposed to existing noise sources.

Objectives and requirements

- 6. Where it is particularly difficult to separate noise sensitive development from noisy activities, plans should contain an indication of any general policies which the local planning authority proposes to apply in respect of conditions or planning obligations.
- 8. Local planning authorities must ensure that noise generating development does not cause an unacceptable degree of disturbance. They should also bear in mind that if subsequent intensification or change of use results in greater intrusion, consideration should be given to the use of appropriate conditions.

Implications for the LDP

Although TANs are prepared to inform development plans, the LDP should have regard to minimise noise impacts from e.g. considering the use of low noise surfaces, avoiding heavy traffic in proximity to sensitive receptors, and promoting low noise vehicles for e.g. bus fleets; noise sensitive development. See commentary on EU Directive 2002/49/EC

- 9. Noise characteristics and levels can vary substantially according to their source and the type of activity involved. In the case of industrial development, for example, the character of the noise should be taken into account as well as its level. Sudden impulses, irregular noise or noise which contains a distinguishable continuous tone will require special consideration.
- 10. Local planning authorities should consider whether proposals for new noise-sensitive development would be incompatible with existing activities, taking into account the likely level of noise exposure at the time of the application and any increase that may reasonably be expected in the foreseeable future.
- 11. Measures introduced to control the source of, or limit exposure to, noise should be proportionate and reasonable.

for implications for Community Plan.

Affected issues: Social fabric

Education and Skills

UK/National

Education in Wales: Our national mission 2017-21

https://gov.wales/topics/educationandskills/allsectorpolicies/education-in-wales/?lang=en

The plan builds on both the 2014 Qualified for Life plan and the 2015 review of curriculum and sets out how the school system will move forward over the period 2017-21 securing implementation of the new curriculum with a focus on leadership, professional learning, and excellence and equity within a self-improving system.

| Objectives and requirements | Implications for the LDP |
|--|--|
| The aims of the strategy is to utilise the three-tiers of the education system (Welsh Government, the middle tier-Four regional consortia, local authorities, diocesan authorities, Estyn, Qualifications Wales, Education Workforce Council (EWC), examination boards and higher education-and schools) to transform education by 2021. | Affected issues: education and skills, economy |

Extending Entitlement: Supporting young people 11-25 in Wales (2005)

https://gov.wales/topics/educationandskills/skillsandtraining/youth-work/extending-entitlement-support-for-11-to-25-year-olds-in-wales/?lang=en

The Additional Learning Needs and Education Tribunal (Wales) Act 2018

https://gov.wales/topics/educationandskills/schoolshome/additional-learning-special-educational-needs/transformation-programme/legislationand-statutory-quidance/?lang=en

This legislation creates the framework to improve the planning and delivery of additional learning needs (ALN). The Act replaces the terms 'special educational needs' (SEN) and 'learning difficulties and/or disabilities' (LDD) with the new term ALN.

| Objectives and requirements | Implications for the LDP |
|-----------------------------|---|
| The act seeks to: | Affected issues: sustainable development, |

| • | identify needs early, | education and skills, economy, social fabric |
|---|--|--|
| • | put in place effective support and monitoring, | |

Welsh in Education Strategic Plan (Pembrokeshire) 2017-2020

https://www.pembrokeshire.gov.uk/pembrokeshire-schools/welsh-in-education-strategic-plan

• and adapt interventions to ensure they deliver desired outcomes.

The vision is to 'Ensure that all pupils are able to access Welsh-medium education of the highest standard across the Authority.'

| Objectives and r | requirements | Implications for the LDP |
|------------------|---|---|
| By 2020: | | Affected issues: sustainable development, |
| 1. A Welsh-r | nedium 3-16 school will be established in Haverfordwest, | education and skills, economy |
| | in Welsh first language and second language will be consistently higher ational average, | |
| | able improvement in the progression between pre-school and the n Phase, and also between KS2 and KS3. | |
| | e demand for Welsh-medium education and respond to findings, increasing ers who receive Welsh-medium education. | |

Transport

International/European

Roadmap to a Single European Transport Area (2011)

https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52011DC0144

With its Transport Policy White Paper, the Commission proposed an Action Plan aimed at bringing about substantial improvements in the quality and efficiency of transport in Europe. It also proposed a strategy designed to gradually break the link between constant transport growth and economic growth in order to reduce the pressure on the environment and prevent congestion while maintaining the EU's economic competitiveness.

Objectives and requirements

The principal aims suggested in the White Paper include:

- reducing the use of petrol and diesel cars in cities by half by 2030, phasing them out completely by 2050 and achieve CO2-free city mobility by 2030;
- increasing the use of low-carbon sustainable fuels in air transport to 40 % by 2050;
- reduce EU CO2 emissions from ship fuels by 40 % by 2050;
- switching 30 % of road freight travelling over 300 km to rail and waterborne transport by 2030, and over 50 % by 2050;
- tripling the existing high-speed rail network by 2030. The majority of medium-distance passenger transport should go by rail by 2050;
- establishing a fully functioning, EU-wide TEN-T core network integrating all forms of transport by 2030;
- connecting major airports to rail and core seaports and rail and inland waterways by 2050;

Implications for the LDP

The LDP should aim to contribute to these objectives by setting appropriate guidelines to improve road safety, protect the environment and curb greenhouse gas emissions from transport.

Affected issues: population, human health, climatic factors

- introducing traffic management systems for the various transport modes, such as for rail and road;
- developing a multimodal transport information management and payment system by 2020;
- halving road casualties by 2020 and reduce these to almost zero by 2050;
- fully apply the 'user pays' (i.e. those who use infrastructure pay for it) and 'polluter pays' (i.e. those who pollute pay for it) principles.

UK/National

One Wales: Connecting the Nation: The Wales Transport Strategy WTS

https://gov.wales/docs/det/publications/140909-transport-strategy-en.pdf

Joint Transport Plan for South West Wales 2015 - 2020

N/A

The WTS revises and replaces the existing 'Transport Framework for Wales' (National Assembly for Wales 2001) and provides a more detailed blueprint for the development of a transport system in Wales which supports WG objectives. The WTS outlines the transport strategy for Wales until 2030, and will be neither prescriptive nor exhaustive in order to remain flexible enough to respond to other WG strategies and plans that may emerge throughout the life of the strategy. The 5 year regional plans provide the detail for WTS and outline the projects for each highway authority.

| Objectives and requirements | Implications for the LDP |
|--|--|
| The outcomes of the WTS are as follows. | The LDP and the Transport Strategy should aim to be consistent with each other being |
| Social outcomes: Improving sustainable accessibility | working towards the same set of overall goal: |
| Improving access to healthcare, to education and life-long learning, to employment opportunities, to key tourist sites, to shopping and leisure facilities, opportunities that encourage healthy lifestyles; | namely contributing towards sustainable development. |

| • | Economic outcomes: Supporting the economy |
|---|--|
| | Improving connectivity within Wales and internationally, the efficient and reliable movement of people, maintaining the fabric of Wales' transport assets, accommodating freight sustainably, improving the actual and perceived safety of travel; and |

Affected issues: air quality, climatic factors, population and human health.

• Environmental outcomes: Valuing the Environment

Reducing the impact of transport on air pollution, flood risk, greenhouse gas emissions, land contamination, noise and vibration and water and light pollution, respect, conserve and enhance Wales' distinctiveness, historic environment, landscape, townscape, biodiversity and reducing community severance.

Technical Advice Note (TAN) 18: Transport (2007)

https://gov.wales/topics/planning/policy/tans/tan18/?lang=en

TAN's along with circulars should be taken into account by local authorities when preparing the LDP as they will in some cases be material to decisions on planning applications. They may also be included by the Assembly government and planning inspectors where they are relevant to those application or appeals that are "called in".

| Objectives and requirements | Implications for the LDP |
|---|---|
| The revised TAN 18 replaces the previous 2001 version with the following sections: Integration between land use planning and transport; Location of development; Parking; Design of development; Walking and cycling; Public transport; Planning for transport infrastructure; | The LDP should aim to contribute to these objectives by setting appropriate objectives and measures (e.g. supporting more sustainable land use patterns and making more sustainable modes of travel more attractive). Affected issues: health & well being, population, air quality, noise |

Assessing impacts and managing implementation.

Regional/Local

South West Wales Regional Transport Plan 2015-2020

The RTP for South West Wales set out the transport strategy and implementation policy for the regional for the period 2015 – 2020. The document includes projects that have both regional and local impact across each highway authority within the region.

| Objectives and requirements | Implications for the LDP |
|---|--|
| The long-term strategy is to: Improving strategic east/west road and rail links Improving linkages between key settlements and strategic employment sites Improving the efficiency of the highway Improving the integration of land use and transportation planning Promoting integration Improving Strategic Bus Corridors Improving safety in transport Providing more and better information | The land use planning system has the potential to alter travel patterns, promote sustainable travel choices. This should be reflected in the LDP strategy and policies. The potential to alter travel patterns, promote sustainable travel choices and contribute to environmental improvements should be reflected in the objective of the SA. |

Pembrokeshire County Council and Pembrokeshire Coast National Park Rights of Way Improvement Plan (RoWIP2) for Pembrokeshire (2018)

This plan identifies, prioritises and plans for improvements to the rights of way network in Pembrokeshire. It also addresses the need to improve access opportunities for groups with special needs. The Plan is divided into two sections; Part 1 is an assessment of local rights of way. It sets out the main characteristics of the network in Pembrokeshire, explains the purpose of the ROWIP, says what background work has already been carried out, summarises previous consultations and examines a number of key topics. Part 2 of the plan is a statement of action. It summarises the main conclusions from the ROWIP assessments, background documents and report on key issues and the way forward.

| Objectives and requirements | Implications for the LDP |
|---|--|
| There are six RoWIP objectives that guide the long term management and development of | The LDP should take account of the RoWIP2 in |

| the rights of way network: | its policies. |
|---|---------------|
| Objective A – to maintain an accessible network of public paths | |
| Objective B – to provide a more continuous network that meets the requirements of all users | |
| Objective C – to develop a safer network of paths | |
| Objective D – to provide an up-to-date and digitised map | |
| Objective E – to increase community involvement in improvement and management of public | |
| paths | |
| Objective F – to improve promotion, understanding and use of the network of public paths | |

Social Fabric

UK/National

Cymraeg 2050: Welsh language strategy (2017)

https://gov.wales/topics/welshlanguage/welsh-language-strategy-and-policies/cymraeg-2050-welsh-language-strategy/?lang=en

This strategy identifies specific actions and initiatives through which the WG seeks to increase bilingualism and strengthen the Welsh language.

| Objectives and requirements | Implications for the LDP |
|---|---|
| The Vision for the year 2050: The Welsh language is thriving, the number of speakers has reached a million, and it is used in every aspect of life. Among those who do not speak Welsh there is goodwill and a sense of ownership towards the language and a recognition by all of its contribution to the culture, society and economy of Wales. | The LDP should aim to contribute to these objectives by considering the Welsh Language in all of its policies, specifically in the allocation of housing in strong Welsh Speaking areas. Affected issue: social fabric |

Tackling Crime

https://businesswales.gov.wales/business-crime/tackling-crime

Child poverty strategy for Wales (2015)

https://gov.wales/topics/people-and-communities/people/children-and-young-people/child-poverty/?lang=en

Technical Advice Note (TAN) 20: Planning and the Welsh Language (2017)

https://gov.wales/topics/planning/policy/tans/planning-and-the-welsh-language/?lang=en

The Welsh language is part of the social and cultural fabric of Wales. It is spoken by around 20% of the population, although many others have some knowledge of the language or are in the process of learning it. In some areas both the number of Welsh speakers and the use made of the language is increasing, but in other areas there is a decline. The future well being of the language across the whole of Wales will depend on a wide range of factors, particularly education, demographic change, community activities and a sound economic base to maintain thriving sustainable communities.

| Objectives and requirements | Implications for the LDP |
|---|---|
| The land use planning system should take account of the needs and interests of the Welsh language and in so doing can contribute to its well being. | The LDP should foster the use of the Welsh Language, and consider the implications of its policies on the language. |
| | Affected issues: social fabric, population |

Improving Lives and Communities Homes in Wales (April 2010)

https://gov.wales/topics/housing-and-regeneration/publications/strategydoc/?lang=en

The national housing strategy document outlines the Welsh Government priorities and actions to meet the challenges associated with meeting Wales' housing requirements.

| Objectives and requirements | Implications for the LDP |
|---|---|
| The document sets out the challenges in meeting housing need; the priorities; the actions | The LDP should ensure that national housing |

that will be taken; and the benefits of investing in housing. The document also states the priorities which are:

- Providing more housing of the right type and offering more choice;
- Improving homes and communities, including the energy efficiency of new and existing homes;
- Improving housing-related services and support, particularly for vulnerable people and people from minority groups.

strategy is considered.

Affected issues: social fabric, population

Homes of Wales - A White Paper for Better Lives and Communities (May 2012)

The main purpose of the Plan is to summarise the aims, objectives and planned outcomes set out in 'Better Homes for People in Wales'; monitor and record progress towards delivering the strategy aims and objectives; and record the addition of new policies, programmes and targets developed in response to the evolving housing market since publication of 'Better Homes'.

Objectives and requirements

The key aims of the strategy include:

- Providing homes that are in good condition in safe neighbourhoods;
- Giving people the opportunity to live in good quality homes (defined in the 'Welsh Housing Quality Standard');
- Letting people have a choice of renting or buying, with no significant variations in quality;
- Bringing all existing social housing within the 'Welsh Housing Quality Standard' by 2012;
- Introducing a framework to help low income and vulnerable owner-occupiers to maintain and repair their homes over the longer term;
- Improving the overall quality of the private rented stock and its management;
- Promoting diversity of housing supply by giving people better access and more choice over affordable housing;
- Establishing an equitable rent structure;
- Eliminating the need for homelessness in Wales;
- Increasing accessibility (for the disabled, people threatened by domestic abuse, and

Implications for the LDP

The LDP should allocate sufficient housing land to meet the needs of the population and ensure a mix of sizes and tenures to meet those needs including affordable housing.

The LDP should ensure that housing is well designed to conserve energy and where possible provides for energy needs through renewable sources.

The Community Plan has an existing aim of widening the housing choices in communities. Early work on the next version of the plan has highlighted the needed to prioritise decent housing and increase the supply of affordable housing.

minority ethnic households); and

• Eradicating fuel poverty by 2010.

Affected issues: health and well being, material assets

Technical Advice Note (TAN) 1: Joint Housing Land Availability Studies (2015)

https://gov.wales/topics/planning/policy/tans/tan1/?lang=en

Technical Advice Note (TAN) 2: Planning and Affordable Housing (2006)

https://gov.wales/topics/planning/policy/tans/tan2/?lang=en

In preparing development plans, authorities should ensure that planning policies for affordable housing are compatible with their housing strategy, and with their objectives for land use planning and economic development. They should also take account of the views of those likely to be involved in the delivery of housing: the main landowners, developers, registered social landlords and Housing for Wales. Planning authorities are required to state an affordable housing target in their development plan and indicate how the target will be achieved

Objectives and requirements

Any development plan policy for affordable housing should reflect a good understanding of the needs of the area over the plan period. Where local surveys or other data demonstrate a lack of affordable housing to meet local needs, authorities should, in the development plan indicate how many affordable homes are required in the plan area and set indicative targets for specific suitable sites.

Implications for the LDP

The LDP should provide the framework for the sustainable provision of the affordable housing required in Pembrokeshire.

Affected issues: all

Technical Advice Note (TAN) 6: Planning for Sustainable Rural Communities (2010)

https://gov.wales/topics/planning/policy/tans/tan6/?lang=en

One of the overall goals of the planning system is to support living and working rural communities, by seeking to help communities grow in a sustainable way. Housing, including affordable housing, is required to help businesses expand and keep the vitality of rural communities. Development plans should set out a spatial vision for rural communities and planning should support development that will help achieve a better balance between housing and employment, thereby encouraging people to live and work in the same locality

| Objectives and requirements | Implications for the LDP |
|--|---|
| Development plans must be supportive of proposals that generate wealth to support rural local services and increase the sustainability of a community. Rural development must respond to the challenges posed by climate change. | The LDP should seek to balance the need for rural communities to develop with their likely environmental and social implications. |
| | Affected issue: economy, population, |

Local

Pembrokeshire County Council Local Housing Market Assessment 2012

https://www.pembrokeshire.gov.uk/adopted-local-development-plan/evidence-base

Local Housing Market Assessments (LHMAs) provide a clear view about the specific aims and questions that a Housing / Planning Authority want their partners in the Social Housing and Private Sector Housing to address.

| Objectives and requirements | Implications for the LDP |
|---|--|
| This LHMA was undertaken to inform the Local Housing Strategy and the Development Plans of Pembrokeshire County Council and the Pembrokeshire Coast National Park and the methodology used closely followed that laid out in the Welsh Government's Guidance. | The LDP should take into account the results of the Local Housing Market Assessment and allocate sufficient land to provide for the housing needs and demands in the County. |
| | Affected issues: population |

Pembrokeshire County Council Welsh Language Standards 5 Year Strategy (2018)

https://www.pembrokeshire.gov.uk/customer-service/welsh-language-standards

The Welsh Language (Wales) Measures 2011(1) places a duty on Local Authorities to promote the Welsh language. The act requires that Pembrokeshire produces, and publishes on its website a 5-year strategy that sets out how we propose to promote the Welsh language and to facilitate the use of the Welsh language more widely in Pembrokeshire.

| Objectives and requirements | Implications for the LDP |
|--------------------------------------|--|
| The three focuses are: | The LDP should comply with the Welsh |
| (A)The use of Welsh in our community | Language Scheme to ensure that plans and policies have regard to the Welsh Language. |
| (B)The use of Welsh in our workplace | ponoico navo regara to the violen Language. |
| (C)The use of Welsh in our schools | |

Economy

INTERNATIONAL/EU

Council Regulation (EC) No 1698/2005 of 20 September 2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD)

Rural development 2014-2020

https://ec.europa.eu/agriculture/rural-development-2014-2020 en

The Regulation states a rural development policy should accompany and complement the market and income support policies of the common agricultural policy. The rural development policy should also take into account the general objectives for economic and social cohesion policy and contribute to their achievement, while integrating other major policy priorities as spelled out in the conclusions of the Lisbon and Göteborg European Councils for competitiveness and sustainable development.

| Objectives and requirements | Implications for the LDP |
|---|--|
| The objectives of the regulation are to foster rural development. | The LDP should aim to support rural areas in Pembrokeshire, encouraging rural diversification and economic efficiency. |
| | Affected issues: economy, social fabric, landscape |

European Structural Funds 2014-2020

https://gov.wales/funding/eu-funds/2014-2020/?lang=en

Europe 2020 strategy

https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/european-semester/framework/europe-2020-strategy_en

EU budget: Regional Development and Cohesion Policy beyond 2020

http://europa.eu/rapid/press-release IP-18-3885 en.htm

Common Agricultural Policy (1958)

Common Agricultural Policy Reform (2003)

Common Agricultural Policy Reform 2014-2020 (2013)

https://ec.europa.eu/agriculture/cap-overview/history_en

The Common Agricultural Policy (CAP) is the set of rules and regulations which govern agricultural activities in the European Union. Under CAP, economic support to farmers since the 1960s was largely given in direct proportion to production. CAP resulted in sweeping changes in farming practice; farmers intensified their farming methods in order to produce more and so attract greater financial support. Many farms have therefore become more specialised and traditional farming was being abandoned across large areas of the UK. CAP revisions are aimed at a gradual transfer of subsidy to support land stewardship rather than specific crop production. A relatively small number of key practices have a significant effect on the condition of wildlife. If CAP revision continues to address these there should be attendant benefits for biodiversity.

Continue to seek to influence agricultural policy and practice at the most appropriate level to secure environmental and socio-economic benefits

Changes in CAP payments may result in a shifting social landscape within the agricultural community, as well as, we hope, beneficial changes to landscape character.

UK/National

Welsh Coastal Tourism Strategy, Welsh Government 2008

https://gov.wales/docs/drah/publications/Tourism/090612coastaleng.pdf

This document presents a guide for the development of coastal tourism and seeks to build upon the economic potential, environmental quality and community benefit of coastal tourism.

| Objectives and requirements | Implications for the LDP |
|-----------------------------|-------------------------------------|
| Strategic aims to include: | The LDP should aim to encourage the |

| • | To ensure that sustainable tourism is making an increasing contribution to the local |
|---|--|
| | economy of coastal communities; |

• To improve the quality of the visitor experience;

- To achieve an integrated approach to the development and management of coastal tourism;
- To safeguard and protect the environment and cultural heritage as a key resource for the development of coastal tourism;

development of a quality tourism environment.

Affected issues: all

Welsh Government Rural Communities - Rural Development Programme 2014-2020

https://gov.wales/topics/environmentcountryside/farmingandcountryside/cap/ruraldevelopment/wales-rural-development-programme-2014-2020/?lang=en

Event Wales: A Major Events Strategy for Wales 2010 – 2020

https://gov.wales/topics/culture-tourism-sport/major-events/event-wales-a-major-events-strategy-for-wales-2010-2020/?lang=en

Social Enterprise Action Plan 2009

https://gov.wales/topics/people-and-communities/communities/publications/actionplan09/?lang=en

Technical Advice Note (TAN) 4: Retail and Commercial Development (2016)

https://gov.wales/topics/planning/policy/tans/tan4/?lang=en

Information on the retail industry in a local planning authority's area together with information on the functioning of their town centres will assist the preparation of development plans and the consideration of planning applications.

| Objectives and requirements | Implications for the LDP |
|--|--|
| The Welsh Government's objectives for retail and commercial centres are to: | The LDP should seek to balance the need for |
| Promote viable urban and rural retail and commercial centres, as the most sustainable locations to live, work, shop, socialise and conduct business. | retail developments with their likely environmental and social implications. |
| Sustain and enhance retail and commercial centres vibrancy, viability and attractiveness. | |

• Improving access to, and within, retail and commercial centres by all modes of transport, especially walking, cycling and public transport.

Affected issue: all

Technical Advice Note (TAN) 13: Tourism (1997)

https://gov.wales/topics/planning/policy/tans/tan13/?lang=en

Tourism comprises a range of different, but interdependent activities and operations which overlap with sport, entertainment, the arts and other recreation and leisure activities. It makes a major contribution to the Welsh economy, provides employment in a wide variety of occupations and can bring benefits to local economies and communities in urban and rural areas.

| Objectives and requirements | Implications for the LDP |
|--|--|
| The Wales Tourist Board has responsibility for promoting and developing tourism in Wales. It has a duty to advise Government and other public bodies, including local authorities, on matters affecting tourism. | The LDP should seek to provide an appropriate framework for developing sustainable tourism in Pembrokeshire. |
| | Affected issue: all |

Prosperity for All: economic action plan (WG, 2017)

https://gov.wales/topics/businessandeconomy/economic-action-plan/?lang=en

The action plan represents the Welsh Governments strategy for the economy in Wales post-Brexit.

| Objectives and requirements | Implications for the LDP |
|--|--------------------------|
| The main themes of the action plan are: | |
| Support people and businesses to drive prosperity, | Affected issues: all |
| Tackle regional inequality and promote fair work, | 7.11.00.00 1.00.000 a.i. |
| Drive sustainable growth and combat climate change | |
| Build ambition and encourage learning for life | |

- Equip everyone with the right skills for a changing world
- Deliver modern and connected infrastructure
- Promote and protect Wales' place in the world

Regional/Local

Pembrokeshire Destination Management Plan 2013-2018

http://www.tourismhelp.co.uk/content.asp?id=339

http://www.tourismhelp.co.uk/objview.asp?object_id=691

The Destination Pembrokeshire Partnership brings together key partners to address; reduced profit margins and under-investment in facilities; increased competition from Europe and the UK; changing expectations and demographics; and utilising digital marketing.

| Objectives and requirements | Implications for the LDP |
|---|--|
| The five objectives are: | The LDP should seek to promote sustainable, |
| Working Together Effectively | quality tourism while being considered as part |
| 2. Re-focusing marketing | of the wider priority for promoting sustainable economic growth in the area. |
| 3. Creating a year round quality experience | dodinenno growar in the area. |
| 4. Developing and sustaining infrastructure, environment and cultural resources | Affected issues: economy, population, |
| 5. Improving business practice, profitability and performance | environment. |

Town Centre Regeneration Masterplans (Pembrokeshire, 2016 & 2018)

https://www.pembrokeshire.gov.uk/objview.asp?object_id=3377&language=

The Regeneration Team in Pembrokeshire County Council are in the process of creating masterplans for the 6 town centres across Pembrokeshire. The process started in 2016 with the main town of Haverfordwest having elements of the plan implemented in 2017; namely; the improvements to Castle Square.

| Objectives and requirements | Implications for the LDP |
|--|---|
| To regenerate the town centres of Haverfordwest, Pembroke, Pembroke Dock, Fishguard, Tenby, Narberth and Milford Haven | The LDP should have regard to the Regeneration Masterplans. |

Climatic Factors

International/European

The Kyoto Protocol on Climate Change (1997)

http://unfccc.int/kyoto_protocol/items/2830.php

United Nations Framework Convention on Climate Change (UNFCCC) (1994)

http://unfccc.int/2860.php

Gleneagles Dialogue and Plan of Action

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/48584/gleneagles-planofaction.pdf

EU Sustainable Development Strategy (2006) http://ec.europa.eu/environment/sustainable-development/strategy/index_en.htm

EU Second European Climate Change Programme – ECCP II (2005)

https://ec.europa.eu/clima/policies/eccp/second en#tab-0-0

EU Climate Change programme

Renewable Energy Directive 2009

https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32009L0028

EU Emissions Trading scheme (2005) Revision for phases 3(2013-2020) &4(2021-2030)

https://ec.europa.eu/clima/policies/ets/cap_en#tab-0-0

Agenda 21 (1992)

http://www.unep.org/documents.multilingual/default.asp?documentid=52

UK/National

Low carbon industrial strategy: a vision (2009)

https://www.gov.uk/government/publications/low-carbon-industrial-strategy-a-vision

The Climate Change act (2008) created a legal obligation to reduce carbon emissions 26% by 2020 and 80% by 2050

Objectives and requirements The vision puts an emphasis on the savings that the industry could make and is therefore a steering document. As a result, it does not have a specific set of objectives. The LDP should aim to reduce the contribution of Wales to climate change by reducing greenhouse gas emissions and thereby contributing to meet the UK CO₂ reduction

Affected issue: climatic factors

target.

Energy Act 2008, 2010 & 2013

http://www.legislation.gov.uk/ukpga/2008/32/contents

A succession of Energy acts have been passed over the past 10 years, with the overarching aim of reducing carbon dioxide emissions whilst retaining a safe and secure energy supply.

| Objectives and requirements | Implications for the LDP |
|--|--|
| The 2008 act made provisions for the underground storage of carbon dioxide to prevent it being released into the atmosphere. | The LDP should aim to reduce the contribution of Wales to climate change by reducing |
| The 2010 revision allowed the state to fund carbon capture projects. | greenhouse gas emissions and thereby contributing to meet the UK CO2 reduction |
| The latest act in 2013 shifts the emphasis towards Nuclear Power as a replacement for Coal- | target. |
| fired plants as they reach the end of their viable lives. | Affected issue: climatic factors |

Department for Transport Single Departmental Plan

https://www.gov.uk/government/publications/department-for-transport-single-departmental-plan/department-for-transport-single-departmental-plan/department-for-transport-single-departmental-plan-may-2018

| Sets out a long term strategy for a modern, efficient and sustainable transport system up to 2020. | |
|--|--|
| Objectives and requirements | Implications for the LDP |
| Support the creation of a stronger, cleaner, more productive economy Help to connect people and places, balancing investment across the country Make journeys easier, modern and reliable Make sure transport is safe, secure and sustainable | The strategy should aim to minimise CO ₂ and other greenhouse gas emissions and promote more environmentally friendly travel choices. Affected issue: climatic factors |
| 5. Prepare the transport system for technological progress, and a prosperous future outside the EU | |

The UK Climate Change Programme DEFRA 2006 and the Climate Change Act 2008

https://www.legislation.gov.uk/ukpga/2008/27/contents

6. Promote a culture of efficiency and productivity in everything we do

The UK's climate change programme sets out the Government's and the devolved administrations' approaches to the challenge of climate change. It explains why the climate is changing and what its effects might be. Moreover, it explains the new measures the Government and the devolved administrations are introducing to reduce emissions further and achieve the UK's climate change targets and how climate change is expected to affect the UK, how the UK might need to adapt, and the action the Government and the devolved administrations have started to take to prepare for this.

| Objectives and requirements | Implications for the LDP |
|---|--|
| The UK's target under the Kyoto Protocol to reduce its greenhouse gas emissions is 12.5% below 1990 levels by 2008-2012; The domestic goal is a 20% reduction in carbon dioxide emissions below 1990 levels by 2010; and In the long term, the Climate Change act (2008) created a legal obligation to reduce carbon emissions 26% by 2020 and 80% by 2050. | The LDP should aim to reduce the contribution of Wales to climate change by reducing greenhouse gas emissions and thereby contributing to meet the UK CO ₂ reduction target. See 'Our Energy Future' comment on the Community Plan. |

Affected issue: climatic factors

Stern Review on the Economics of Climate Change

http://webarchive.nationalarchives.gov.uk/+/http:/www.hm-treasury.gov.uk/sternreview_index.htm

Climate Change Strategy for Wales (2010)

https://gov.wales/topics/environmentcountryside/climatechange/emissions/climate-change-strategy-for-wales/?lang=en

The strategy includes targets to achieve annual carbon reduction-equivalent emissions reductions of 3% per year by 2011 in areas of devolved competence. Specific sectoral targets in relation to transport, residential, business, agriculture and land use, public, and waste sectors will be set. On a sector-by-sector basis the strategy identifies current trends, opportunities for cuts in emissions and a vision for each sector. These are intended to provide a focus for action, in order for the WG's target outcomes to be achieved.

| Objectives and requirements | Implications for the LDP |
|--|--|
| All parts of public sector in Wales to work towards 3% annual reductions in the greenhouse gas emissions for which they are responsible. | The LDP should aim to promote more energy conservation, higher energy efficiency and |
| Emission reductions of at least 40% by 2020 | renewable energy sources. |
| Appropriate adaptation to climate change across all sectors | Affected issues: climatic factors |

Air Quality

International/European

EU Directive (2008/50/EC) (the New Air Quality Framework Directive) The Council of the European Union 11 June 2008

https://eur-lex.europa.eu/legal-content/EN/TXT/?gid=1486474738782&uri=CELEX:02008L0050-20150918

UK/National

The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Volumes 1&2) DEFRA 2007

https://www.gov.uk/government/publications/the-air-quality-strategy-for-england-scotland-wales-and-northern-ireland-volume-1

The Air Quality Strategy sets out air quality objectives and policy options to further improve air quality in the UK from today into the long term. As well as direct benefits to public health, these options are intended to provide important benefits to quality of life and help to protect our environment.

| Objectives and requirements | Implications for the LDP |
|---|---|
| due to the trans-boundary nature of air-pollutants. | Objectives and measures set out in the LDP should aim to contribute to the achievement of the proposed new strategy. Affected issues: air quality and human health |

Welsh Government - Clean air zones and air quality fund (2018)

https://gov.wales/newsroom/environmentandcountryside/2018/180424-20m-air-quality-fund-among-new-measures-to-improve-air-quality-inwales/?lang=en

The fund is available to Local Authorities in Wales until 2021 to improve air quality. The clean air designation zones will be introduced in due course.

The Minister for Environment also announced new 50mph speed limits on 5 stretches of Motorway and trunk roads and the creation of an air

| quality website. | | |
|---|---|--|
| Objectives and requirements | Implications for the LDP | |
| To reduce nitrogen dioxide (N0²) levels To improve area quality | The LDP should have regard to the air quality zones as they emerge particularly with respect to industrial type employment areas and allocations. | |
| | Affected issues: air quality and human health | |
| Local Air Quality Management (LAQM) | | |
| https://gov.wales/topics/environmentcountryside/epq/airqualitypollution/airqu | ality/guidance/?lang=en | |
| Local Authorities must produce Air Quality Management Areas (AQMA) and action plans as part of their statutory duties set out under the Environment Act 1995. The Welsh Government has produce LAQM guidance to undertake their statutory duty. | | |
| Objectives and requirements | | |
| To provide guidance for Local Authorities to follow | Affected issues: air quality and human health | |
| Air Quality Management Areas (AQMA) – Pembrokeshire | | |
| https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=406 | | |
| Pembrokeshire County Council have designated two areas as Air Quality Ma | anagement Areas as a result of the Environment Act 1995. | |
| Objectives and requirements | Implications for the LDP | |
| To monitor and reduce nitrogen dioxide (N0²) levels To improve area quality | The LDP should have regard to the air quality zones particularly with respect to industrial type | |

| employment areas and allocations. |
|---|
| |
| Affected issues: air quality, human health, |
| townscape, transport. |

Pembrokeshire Air Quality Management Areas Action Plan 2017

https://gov.wales/newsroom/environmentandcountryside/2018/180424-20m-air-quality-fund-among-new-measures-to-improve-air-quality-inwales/?lang=en

The action plan seeks to improve the conditions at the identified AQMAs.

| Objectives and requirement | s | | Implications for the LDP |
|---|------------------------|---|---|
| The plan suggests the following as measures that could reduce pollutant levels: | | The LDP should have regard to the action plan due to the implications of the measures | |
| 1. Signage | 2. Emissions testing | 3. Restriction to commercial | suggested. |
| 4. Idling policy | 5. Parking policy | vehicle | |
| 7. Speed Controls | 8. Improved visibility | 6. Enforcement | Affected issues: air quality, human health, |
| 10.Increased vegetation | 11.Engage with local | 9. Low emission zones | townscape, transport. |
| 13.Review crossing facilities | transport operator's | 12.Pedestrianisation | |
| 16.Bypass | 14.Promote cycling | 15.Promote walking | |
| 10.090000 | 17.Regeneration | | |

Material Assets

International/European

EU Environmental Liability Directive 2004/35/CE (Directive of the European Parliament and of the Council of 21 April 2004 on "environmental liability with regard to the prevention and remedying of environmental damage")

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02004L0035-20130718

EU Directive 2008/98/EC (the Waste Framework Directive) The European Parliament and the Council of the European Union 19 November 2008

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0098

This directive is primarily aimed at the protection of human health and the environment against harmful effects of collection, transport, treatment, storage and tipping of waste. It also requires Member States to adopt waste management plans and prevention procedures.

Other actions include:

- Common Terminology and definitions of waste
- Effective and consistent rules on disposal and recovery
- Reducing waste movement
- Inspections throughout different stages of waste management
- Polluter pays principle

The Pembrokeshire LDP should take into account the directive when considering its waste management policies and strategies.

Affected issues: air quality, water, human health, material assets

EC Landfill Directive 1999/31/EC Revised Waste Framework Directive & Targets - UPDATE

http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31999L0031

EU Renewable Energy Directive (2009/28/EC)

https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32009L0028

UK/National

Energy Wales: A low carbon transition (2012)

Energy Wales is the Welsh Governments vision for energy production in Wales.

| Objectives and requirements | Implications for the LDP |
|--|---|
| The programme will: | The LDP should take into account the Low |
| Coordinate delivery against our energy priorities, | Carbon Transition for Wales following the |
| Build on existing stakeholder groups to capture advice from a wide range of | consultation outcome. |
| Perspectives, | |
| Market Wales' energy offer to secure more investment for Wales. | |
| Proactively target and secure funding from a number of different sources, | |
| Seek to reinvest benefits realised from energy projects to support further | |
| improvements in infrastructure, to maximise economic and community benefit, | |
| and progress innovative technology to commercialisation in Wales. | |
| Continue the focused, First Minister led engagement that has already been | |
| initiated with industry as well as linking with the Energy and Environment and | |
| other key Welsh Government sector panels. | |
| Actively and clearly communicate the Welsh Government's aims for energy | |
| in Wales, including the wider energy context and the evidence base for our | |

objectives

Towards Zero Waste - Waste Strategy for Wales, Welsh Government (2010)

https://gov.wales/topics/environmentcountryside/epg/waste_recycling/zerowaste/?lang=en

This document sets out the way Wales will deal with its waste up to 2050, with intermediate goals for 2025. It aims to provide an overall strategy for the various sector plans needed to tackle waste.

| Objectives and requirements | Implications for the LDP |
|--------------------------------------|---|
| The sector plans are: | The LDP should aim to increase resource |
| Municipal Waste | efficiency and reduce waste generation. |
| Construction & Demolition | |
| Wholesale and Retail | Affected issue: material assets |
| Collection, Infrastructure & Markets | |
| Public Sector | |

Technical Advice Note (TAN) 8: Renewable Energy, Welsh Government (2005)

https://gov.wales/topics/planning/policy/tans/tan8/?lang=en

This TAN relates to the land use planning considerations of renewable energy; however, UK and national energy policy provide its context. Energy policy is a reserved function that is not devolved to the Assembly Government. Nevertheless, all decisions relating to renewable energy in Wales must take account of the Assembly Government's policy.

| Objectives and requirements | Implications for the LDP |
|-----------------------------|---|
| | The LDP should aim to contribute to the wider policy aims of promoting renewable energy |

of 4TWh of electricity per annum to be produced by renewable energy by 2010 and 7TWh by 2020.

related technologies.

- 1.5. Delivering these targets through the planning system is therefore at the core of this TAN.
- 1.6 As well as developing new sources of renewable energy which are essential to meeting the targets set by energy policy, the Assembly Government is fully committed to promoting energy efficiency and energy conservation.

Affected issues: climatic factors, landscape, material assets

Technical Advice Note (TAN) 12: Design, Welsh Government (2014)

https://gov.wales/topics/planning/policy/tans/tan12/?lang=en

The Welsh Government is committed to achieving good design in all development at every scale throughout Wales. This Technical Advice Note gives more detailed advice on how this may be facilitated within the planning system. The design of development in the environment is significant to the quality of our lives and is a major factor in sustaining a positive image for Wales. Good design has the potential to assist environmental sustainability, economic growth, and social inclusion.

Objectives and requirements

- To make best use of natural resources, incorporate sustainable energy use, waste control measures and provide the means for effective long-term maintenance, efficient operation and management;
- To sustain and enhance character in townscape and landscape by responding to locally distinctive patterns;
- To assess how the layout of infrastructure can contribute to the promotion of walking, cycling and public transport;
- To ensure that the design of infrastructure avoids severance and fragmentation of communities;
- To give particular attention to the needs of people with disabilities, children and elderly people in addressing transport and movement issues;
- To achieve sustainable design solutions which maximise the natural landscape assets and minimise environmental impact on the landscape;

Implications for the LDP

The LDP should avoid/reduce/mitigate adverse impacts on landscape character and cultural heritage.

The LDP should promote accessible, good design that reduces the need for transport and is distinctive and well landscaped and good for wildlife.

Affected issues: biodiversity, climatic factors, air quality, cultural heritage, material assets, landscape

- To contribute to conserving and enhancing wildlife; and
- To sustain local character in areas recognised for their landscape, townscape or historic value.

Technical Advice Note (TAN) 19: Telecommunications, Welsh Government (2002)

https://gov.wales/topics/planning/policy/tans/tan19/?lang=en

This advice takes account of the growth of the telecommunications industry and technology, of the new social and economic demands for communications, and of the Welsh Government's environmental policies.

| Objectives and requirements | Implications for the LDP |
|---|---|
| The nature of some telecommunications development may in same cases bring it into apparent conflict with established local and national planning policies. All telecommunications development is subject to the normal statutory procedures for listed building consent. It is a statutory requirement that applications for prior approval or planning permission for development which involves the construction/installation of one or more antennas need to be accompanied by a declaration that the equipment and installation, when constructed or installed, will operate in full compliance with ICNIRP guidelines. | The LDP should balance the need for telecommunication developments with their social and environmental implications. Affected issues: Visual impacts, landscape character, economy |

Technical Advice Note (TAN) 21: Waste, Welsh Government (2014)

https://gov.wales/topics/planning/policy/tans/tan21/?lang=en

This guidance note provides advice about how the land use planning system should contribute to sustainable waste resource management. With its commitments to sustainable development, the Welsh Government has a desire to address waste issues and develop sustainable methods of waste resource management.

| Objectives and requirements | Implications for the LDP |
|---|--|
| February 2014 update: TAN 21 identifies the need to monitor planning permissions and environmental permits for waste facilities in order to ascertain the total potential waste | Should provide a framework which enables adequate provision to be made for waste |
| management capacity coming forward. The results of this data collection will be published | resource management facilities to meet the |

annually at a national level. The TAN 21 update also introduces the requirement for waste planning assessments, which must be submitted with all planning applications for waste management facilities (disposal, recovery or recycling).

needs of society for the reuse, recovery and disposal of waste.

Affected issue: material assets

Minerals Technical Advice Note (MTAN) 1 – Aggregates, Welsh Government (2004)

https://gov.wales/topics/planning/policy/mineralstans/2888891/?lang=en

This Minerals Technical Advice Note (Wales) sets out detailed advice on the mechanisms for delivering the policy for aggregates extraction by mineral planning authorities and the aggregates industry. The overarching objective in planning for aggregates provision is to ensure supply is managed in a sustainable way so that the best balance between environmental, economic and social considerations is struck, while making sure that the environmental and amenity impacts of any necessary extraction are kept to a level that avoids causing demonstrable harm to interests of acknowledged importance.

Objectives and requirements

- A. To provide aggregate resources in a sustainable way to meet society's needs for construction materials in line with the following objectives:
 - maximising the use of secondary and recycled materials and mineral waste where practicable;
 - ensuring planning permissions for future primary extraction are essential and properly planned for in accord with the Regional Technical Statement;
 - eliminating over the next 5 years any likelihood of future primary aggregate extraction at historically obsolete and long dormant sites.
- B. To prevent unacceptable aggregates extraction from areas of acknowledged landscape, cultural, nature and geological conservation and hydrological importance.
- C. To reduce the impact of aggregates production.
- D. To achieve a high standard of restoration and aftercare, and provide for a beneficial afteruse.
- E. To encourage the efficient use of minerals and maximising the potential use of alternative

Implications for the LDP

The LDP should aim to contribute to maximise the use of secondary and recycled materials by setting appropriate objectives and measures (e.g. by mandatory use of at certain amount of recycled/secondary materials in maintenance and construction projects).

Affected issue: material assets

materials as aggregates.

Regional/Local

The Regional Technical Statement (July 2014) (1st Review) (Southwest region)

http://wales.gov.uk/topics/planning/policy/mineralstans/2888891/?lang=en

Required as result of MTAN 1, the RTS will provide a strategic basis for LDPs in the region in line with objectives.

| Objectives and requirements | Implications for the LDP |
|---|--|
| Maximise the use of secondary and recycled materials and mineral wastes. Safeguard land-based minerals which may be needed in the long term. | The LDP should aim to meet the County's need for minerals without damage to the environment. |
| Acknowledge that where the principles of sustainable development can be achieved, the extension of existing aggregate quarries is likely to be appropriate. | |
| Where there is a need for new areas of aggregates supply, these should come from locations of low environmental constraint and take into account transport implications. | Affected issue: material assets |
| Maintain supply of marine aggregate consistent with the requirements of the Interim Marine Aggregates Dredging Policy (IMADP). | |

Collections, Infrastructure and Markets Sector Plan (CIMP) (2012) Report

https://gov.wales/topics/environmentcountryside/epq/waste_recycling/publication/cimsectorplan/?lang=en

South West Wales Region - Waste Planning Monitoring

https://gov.wales/docs/desh/publications/170223wpmr-south-west-wales-region-en.pdf

This CIMP covers the management of all waste in Wales and suggests where improved recycling is needed. The South West Wales Waste Planning group produces a report to monitor waste and highlights any capacity issues and new sites that will be required with regard to planning permissions.

Objectives and requirements This CIMP seeks to create a sustainable approach to resource management by: ensuring that a high volume of clean, recycling is separated at source (for example on the door step) is collected and delivered to processors (based in Wales as far as possible); and that markets are developed for the recycled material (within Wales as far as possible).

The SWWR monitoring report seeks to:

- report waste arisings and recycling rates
- allow local planning authorities to assess need in their areas

It is important that the LDP takes into account the future waste management needs of the wider South West Wales region as highlighted by the report. This is in order to ensure that there is sufficient suitable land available for the development of facilities that will support more sustainable management facilities, such as compost sites and materials recycling. The LDP should show a good understanding of these requirements, and ideally could identify suitable sites or areas through allocations in the plan.

Affected issues: all

Local authority municipal waste management 2016-17

https://gov.wales/statistics-and-research/local-authority-municipal-waste-management/?lang=en

The waste management report allows the Welsh Government to monitor progress towards the requirements set out in the Waste framework and Landfill Directives from the EU and its own 'Towards Zero Waste' strategy.

| Objectives and requirements | Implications for the LDP |
|--|--|
| To report on waste arisings, compost and re-use rates in Wales | The LDP should encourage developers to include recycling facilities where possible in new developments |
| | Affected issues: all |

Water, including Quality, Quantity and Flood Risk

International/European

EU Directive Establishing a Framework for the Community Action in the Field of Water Policy (2000/60/EC) – The Water Framework Directive https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32000L0060

Requires all Member States to achieve 'good ecological status' of inland water bodies by 2015, and limits the quantity of groundwater abstraction to that portion of overall recharge not needed by ecology.

Objectives and requirements The Water Framework Directive will require all in land and coastal waters to achieve 'good ecological status' by 2015. It will do this by establishing a river basin district structure within which demanding environmental objectives will be set, including ecological targets for surface waters. Affected issue: water

EU Nitrates Directive (91/676/EEC)

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31991L0676

EU Bathing Water Directive 76/160/EEC

Revised Bathing Water Directive 2006/7/EC

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32006L0007

EU Freshwater Fish Directive 78/659/EEC

Amending Directives 2000/60/EC and 2008/105/EC as regards priority substances in the field of water policy Text with EEA relevance 2013/39/EU

https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32013L0039

UK/National

Marine and Coastal Access Act (2009)

https://www.legislation.gov.uk/ukpga/2009/23/contents

The Marine and Coastal Access Act 2009 was passed to create a new, comprehensive management system for our coasts. It was enacted to make provisions for marine functions and activities; to make provisions about migratory and freshwater fish; to make provision for and in connection with the establishment of an English coastal walking route and of rights of access to land near the English coast; to enable the making of Assembly Measures in relation to Welsh coastal routes for recreational journeys and rights of access to land near the Welsh coast; to make further provision in relation to Natural England and the Countryside Council for Wales; to make provision in relation to works which are detrimental to navigation; to amend the Harbours Act 1964; and for connected purposes.

| Objectives and requirements | Implications for the LDP |
|--|--|
| The key themes of the Act include: Set up the Marine Management Organisation in England In Wales, the Welsh Government will lead marine management and regulation. Sets out the provisions to make Marine Policy Statements Create a network of Marine Conservation Zones to protect some of the UK's most | The LDP will have no jurisdiction within the marine environment and development on land is unlikely to affect it. However, there are very small areas of coast which may be impacted by the Act. |
| important marine species and habitats. | Affected issues: biodiversity, recreation and access, fisheries |

Flood and Water Management Act (2010)

https://www.legislation.gov.uk/ukpga/2010/29/contents

UK Marine Policy Statement (March 2011)

https://www.gov.uk/government/publications/uk-marine-policy-statement

The marine policy statement sets out the shared goals and ambitions of the devolved nations, as well as providing the basis for marine plans to be created. The MPS also sets out how marine plan should interact with terrestrial planning systems.

| Ok | jectives and requirements | Implications for the LDP |
|----|--|---|
| • | Promote sustainable economic development; | The LDP should have regard to the MPS when it is implemented. |
| • | Enable the UK's move towards a low-carbon economy, in order to mitigate the causes of climate change and ocean acidification and adapt to their effects; | Affected issues: water, flood, tourism, recreation, material assets |
| • | Ensure a sustainable marine environment which promotes healthy, functioning marine ecosystems and protects marine habitats, species and our heritage assets; and | |
| • | Contribute to the societal benefits of the marine area, including the sustainable use of marine resources to address local social and economic issues. | |

Water Strategy for Wales Supporting the sustainable management of our natural resources (May 2015)

https://gov.wales/topics/environmentcountryside/epg/waterflooding/publications/water-strategy/?lang=en

The aim is to maintain and enhance the resilience of ecosystems and the benefits they provide, and in so doing, meet the needs of present generations without compromising the ability of future generations to meet their needs.

| Objectives and requirements | Implications for the LDP |
|---|--------------------------|
| The strategy sets out 6 key themes with specific objectives for each: | |
| Water for nature, people and business | |
| Improving the way we plan and manage our water services | |
| Delivering excellent services to customers | |
| Protecting and improving drinking water quality | Affected issues: water |
| 21st century sewerage and drainage system | , moded isodes. Water |
| Supporting delivery | |
| | <u> </u> |

Wales Fisheries Strategy 2008

https://gov.wales/topics/environmentcountryside/marineandfisheries/strategy/?lang=en

Draft Welsh National Marine Plan (December 2017)

https://beta.gov.wales/draft-welsh-national-marine-plan

Following the Marine Policy Statement, the Welsh Government are now in the process of creating a marine spatial plan for Wales. The draft document was out for consultation in late 2017.

| Objectives and requirements | Implications for the LDP |
|---|---|
| The aim of the marine plan is to set out a regime by which applications for developments beyond the high-water mark are processed. This will allow developments to be decided in a similar way to terrestrial applications. | Affected issues: water and flood risk, biodiversity |

Technical Advice Note (TAN) 14 - Coastal Planning, Welsh Government (1998)

https://gov.wales/topics/planning/policy/tans/tan14/?lang=en

This advice note sets out how coastal issues should be considered in land use planning.

| · ~ | |
|--|--|
| Objectives and requirements | Implications for the LDP |
| 5. It is important to recognise that on-shore development can often have an impact off-shore: this is particularly so adjacent to a candidate marine Special Area of Conservation (SAC).8. Key issues: Planning considerations will vary depending on the nature of the coastline, but there are a number of specific issues in relation to the coastal zone that the planning system should address. These are, in terms of: | The LDP should aim to consider the sensitive nature of the coastal environment and avoid/reduce/mitigate impacts from developments on protected stretches of coast. Affected issues: biodiversity, soil, water, landscape |
| Proposals for Development: the nature of the ground conditions and physical processes, and the potential need for remedial and defence works; likely effects on physical and biological processes along the coast; the potential effects on mineral, water and conservation resources; | |
| as well as high-quality agricultural land; and any potential visual impact from both | |

land and sea; and

- Nature and landscape conservation: the role of physical and biological processes in creating, maintaining and altering features of nature and landscape conservation value; the effects of statutory and other nature and landscape conservation policies in the coastal zone, which may not always be contiguous with the low water mark; and the importance of the integrity and special features of Marine Nature Reserves, candidate marine SACs and coastal SACs, Special Protection Areas and Ramsar sites. EC Directives relevant to planning in the coastal zone should always be borne in mind.
- 10. Some coast-specific considerations will need to be incorporated into the planning framework by local planning authorities. These include:
 - On-shore: the risks to any form of development associated with the physical processes and problem ground conditions; the likely impact of any development on the geomorphological
 - processes and features, and on the important features of the littoral and sub-littoral zones; and
 - Off-shore, in the intertidal zone, and the maritime fringe, the sediment budget (1) of the physical system; and the sensitivity of the overall coastal environment to natural change or human influences.
 - Consideration of these issues will allow local planning authorities to reflect variations in physical and biological conditions along their stretches of coastline instead of adopting a blanket approach to coastal planning. It will also enable them to consider the effects, including cumulative effects, of development proposals upon sites of nature and landscape conservation interest.

Technical Advice Note (TAN) 15: Development and Flood Risk (2004)

https://gov.wales/topics/planning/policy/tans/tan15/?lang=en

This advice note on development and flood risk relates to sustainability principles (section 2.2 PPW), and provides a framework within which

risks arising from both river and coastal flooding, and from additional run-off from development in any location, can be assessed.

Objectives and requirements

3. Aims:

- Direct new development away from those areas which are at high risk of flooding; and
- Where development has to be considered in high risk areas (zone C) only those developments which can be justified on the basis of the tests outlined in section 6 and section 7 are located within such areas.
- 6.2 Nature of development/land use: New development should be directed away from zone C and towards suitable land in zone A, otherwise to zone B, where river or coastal flooding will be less of an issue.
- 8.2 Surface water run-off from new development: Built development, such as buildings, roads and roofing, tends to increase the surface area of impermeable ground, thus reducing percolation and increasing rapid surface run-off. This has the effect of reducing the time it takes for precipitation to enter the watercourse and consequently increasing the peak discharge. SUDS can perform an important role in managing run-off from a site and should be implemented, wherever they will be effective, in all new development proposals, irrespective of the zone in which they are located.
- 8.3 Development in one part of a catchment may increase run-off and hence flood risk elsewhere, therefore, the aim should be for new development not to create additional run-off when compared with the undeveloped situation, and for redevelopment to reduce run-off where possible. It is accepted that there may be practical difficulties in achieving this aim. Appendix A2.4 Impacts of climate change: The rise in sea level will change the frequency of occurrence of high water levels. There may also be secondary impacts such as changes in wave height due to increased water depths, as well as predicted changes in the frequency, duration and severity of storm events. It should be recognised however that while sea level rise and climate change could have a significant impact on flooding consequences for existing flood zones, current information suggests that the actual extent of such areas at risk are not expected to increase significantly.

Implications for the LDP

The LDP should aim to avoid proposing new developments on classified areas of flood risk, promote the use of permeable surfaces/pavements and sustainable drainage schemes to reduce surface runoff. Special attention should be paid to making existing and proposed developments 'climate change proof'.

Affected issues: water, climatic factors, material assets

Regional/Local

Strategic Framework for Integrated Coastal Zone Management (ICZM) in Pembrokeshire (2006)

http://www.pembrokeshirecoastalforum.org.uk/wp-content/uploads/2011/05/Coastal-Zone-Management-in-Pembrokeshire.pdf

The Pembrokeshire Coastal Forum co-ordinates actions between the various administrative bodies and organisations involved in the ICZM in securing the short and long term sustainable management of the Pembrokeshire coast. The framework will provide opportunities for involvement – 'networking' - of all those with an interest, activity or function in the coastal and maritime environment of Pembrokeshire.

The vision for the coastal zone of Pembrokeshire is one where:

- the economy, based on the assets of the coastal zone, is thriving;
- coastal communities are vibrant
- the quality of the environment is maintained and enhanced to the highest standards
- the coastal waters are safe and clean
- the public are able to gain access to it and enjoy it
- · these qualities are appreciated and understood by all.

| Objectives and requirements | Implications for the LDP |
|--|---|
| In order to achieve the overall mission for ICZM in Pembrokeshire the following individual objectives need to be achieved. For each objective key actions required are identified. | PCC should work in partnership with the PCNP in its efforts to ensure the coast's environment and communities are sustained and protected |
| 1. To create the necessary organisational framework and support for the development of ICZM in Pembrokeshire - to achieve this it will be necessary to: establish structures necessary to achieve aim, building on the existing Concordat group and the PCF – agree terms of reference, way of working etc devise and agree a work programme define and secure the necessary resources [human and financial] to undertake the agreed work programme | from developments that will cause unnecessary negative impacts. Affected issues: all |
| 2. To ensure that all stakeholders, including the general public, are well informed about the issues facing the coastal zone and appreciate the benefits - to achieve this it will be | |

necessary to:

- encourage the dissemination of the results of research and information gathering
- · develop a programme of awareness raising
- 3. To seek the engagement of all stakeholders national to local in the ICZM process in Pembrokeshire to achieve this it will be necessary to:
 - demonstrate the benefits of engagement in the ICZM process
 - ensure that adequate structures are in place to help draw in and enable the involvement of all stakeholders [including local communities] in the ICZM process
 - to draw on the expertise of organisations in the field of community action and to agree working practices with them to avoid duplication of effort in engaging the wider community.
- 4. To encourage all sectors / organisations involved with the coastal zone to adopt the principles of ICZM in the planning and management of their activities to achieve this it will be necessary to:
 - agree criteria and methods to assist stakeholders in adopting the principles of ICZM
- 5. To explore the benefits of an integrated spatial approach to the planning and management of the coastal zone to achieve this it will be necessary to:
 - work towards a spatial approach for the coastal zone, building on existing plans.
- 6. To fit the planning and management of the coastal zone of Pembrokeshire within the framework provided by ICZM strategies for Wales, UK and EU to achieve this it will be necessary to:
 - establish close links with adjacent coastal zones
 - ensure that the existing link with WCMP is maintained and strengthened.
- 7. To promote a sound knowledge base about all aspects of the coastal zone [economic, social, environmental and cultural] and promote access to it to achieve this it will be necessary to:
 - devise and agree a programme of monitoring the state of the coast
 - undertake an information audit and gap analysis
 - promote a co-ordinated programme of appropriate research to fill gaps in knowledge; and
 - create mechanisms to enable wide access to information.
- 8. To monitor and review the development / implementation of policies in the coastal zone –

to achieve this it will be necessary to:

• establish a regular reporting process on the activity and impact of stakeholders in following the principles of ICZM

River Basin Management Plan Western Wales River Basin District (2015-2021), Natural Resources Wales (2015)

nttps://naturalresources.wales/evidence-and-data/research-and-reports/water-reports/river-basin-management-plans-published/?lang=er

Natural Resources Wales have reviewed the previous plan published in 2009 by the environment agency. The plan is about the pressures facing the water environment in the Western Wales River Basin District, and the actions that will address them. It has been prepared under the Water Framework Directive, and is the second of a series of six-year planning cycles.

| Objectives and requirements | Implications for the LDP |
|--|---|
| For the next six years the focus in Wales will be on; | The LDP should have regard to the river basin |
| Preventing deterioration in all water bodies to the new tighter standards for some elements. Improving compliance with good status by targeting measures locally in an integrated way to deliver environmental improvements in WFD water bodies and Protected Areas. This will involve targeting 21 water bodies predicted to achieve good across Wales to deliver a 4% improvement in WFD compliance. Improving some of our worst performing water bodies by aiming to improve the overall status of by one class for 4 water bodies. Identifying where element level improvements will be achieved, but where further measures will be required to deliver an overall ecological status change. This will enable us to measure progress towards achieving good status and will lead to important benefits for the environment and improve ecological resilience. Developing our approach to natural resource management by working at a local catchment level and capturing the wider benefits delivered through WFD. Water is a valuable natural resource and WFD is a key tool in delivering natural resource management. We will also make the most of opportunities provided by the requirements of the Well-being of Future Generations (Wales) Act 2015, the Planning (Wales) Act 2015 and Environment (Wales) Bill to help us deliver objectives. | management plan. |

 Continue working with partners to deliver improvements and look for opportunities to 'join up' local actions to maximise benefits to the environment, economy and society of Wales.

The Cleddau & Pembrokeshire Coastal Rivers Abstraction Licensing Strategy (2014)

https://naturalresources.wales/media/681624/cleddau-pembs_strategy_english.pdf

The Teifi and North Ceredigion Abstraction Licensing Strategy (2014)

https://naturalresources.wales/media/681623/teifi-north-ceredigion_strategy_english.pdf

Natural Resources Wales created a licensing strategy in order to sustainably abstract water from rivers across Wales

Objectives and requirements

The Coastal Abstraction Management Plan (CAMS) will contribute the following to the Water Framework Directive by:

- providing a water resource assessment of rivers, lakes, reservoirs, estuaries and groundwater, referred to as water bodies under the WFD;
- identifying water bodies that fail flow conditions expected to support good ecological status:
- preventing deterioration of water body status due to new abstractions; providing results which inform RBMPs.

Implications for the LDP

The LDP should promote the sustainable use of water resources through encouraging the use of sustainable design features in new developments and helping to prevent over abstraction of valuable, limited water resources from industrial/domestic and leisure activities.

Affected issues: Water, population and human health, economic development

River Cleddau Core Management Plan (2012)

https://www.naturalresources.wales/media/670822/Afonydd%20Cleddau%20plan%20English.pdf

River Teifi Core Management Plan (2012)

nttps://www.naturalresources.wales/media/670702/Afon%20Teifi%20%20River%20Teifi%20Management%20Plan.pdf

The management plans set out the vision and objectives for the River Cleddau and River Teifi catchments respectively.

| Objectives and requirements | Implications for the LDP |
|---|--|
| The Afon Teifi/River Teifi SAC will be maintained or, where necessary, restored to high ecological status, including its largely unmodified and undisturbed physical character, so that all of its special features are able to sustain themselves in the long-term as part of a naturally functioning ecosystem. | The LDP should promote the sustainable use of water resources through encouraging the use of sustainable design features in new developments and helping to prevent over abstraction of valuable, limited water resources from industrial/domestic and leisure activities. |
| | Affected issues: Water, population and human health, economic development |

South Wales Shoreline Management Plan 2 (2010)

http://www.southwalescoast.org/content.asp?id=58

The South Wales Shoreline Management Plan sets out the strategy for the management of coastal defences for the Pembrokeshire County Council shoreline between Amroth and St. Anne's Head

| Objectives and requirements | Implications for the LDP |
|--|---|
| identify sustainable and deliverable policies for managing coastal risks while working with natural processes wherever possible; | The LDP should take account of the shoreline management plans in the area when |
| promote management policies for the coastline over the next 100 years, to achieve long-term objectives that are technically sustainable, environmentally acceptable and economically viable; | addressing coastal issues; however there is a limited coastline in the plan area. |
| be realistic and consider known legislation and constraints, both human and natural, and not promise what cannot be delivered. | |

West of Wales Shoreline Management Plan (2010)

www.westofwalessmp.org/objview.asp?object_id=5808

The West of Wales Shoreline Management Plan sets out the strategy for the management of coastal defences for the Pembrokeshire County

| Council shoreline between St. Anne's Head and St Dogmaels | |
|---|--|
| Objectives and requirements | Implications for the LDP |
| encouraging the provision of adequate and cost-effective flood warning systems; encouraging the provision of adequate, technically, environmentally and economically sound and sustainable flood and coastal defence measures; discouraging inappropriate development in areas at risk from flooding or coastal erosion. Awareness of the uncertainties associated with predicting future shoreline requirements and the importance of monitoring and regular plan review to confirm or otherwise plan policies over time. | The LDP should take account of the shoreline management plans in the area when addressing coastal issues; however there is a limited coastline in the plan area. |

Soil

International/European

EU Thematic Strategy on Soil Protection: Report of the Technical Working Group (2004)

COM/2012/046 The implementation of the Soil Thematic Strategy and ongoing activities

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52012DC0046

UK/National

Environmental Protection Act (1990) Part 2A Contaminated Land (2006)

The Contaminated Land (Wales) (Amendment) Regulations 2012

http://www.legislation.gov.uk/wsi/2012/283/regulation/1/made

Contaminated Land Statutory Guidance for Wales 2012

https://gov.wales/topics/environmentcountryside/epg/contaminatedland/guidance2012/?lang=en

Part 2A was set up as a system for the regulation of contaminated land in England and Wales. The regime provides a framework for identifying and remediating contaminated land. Subsequently Welsh Government have issued an amended regulations to the act and guidance note to identify what constitutes contaminated land.

| Objectives and requirements | Implications for the LDP |
|---|--|
| The regime sets out the primary regulatory role resting with local authorities for the: - Inspection to identify contaminated land. | The LDP should aim to avoid contamination of land, where possible. |
| - to determine whether any particular site is contaminated land | Affected issues: soil, water, biodiversity |
| - to act as enforcing authority for all contaminated land which is not designated as a "special site" (the Environment Agency is the enforcing authority for special sites) | |

Regional/Local

Contaminated Land Inspection Strategy (August 2016)

https://www.pembrokeshire.gov.uk/contaminated-land/how-is-pembrokeshire-county-council-tackling-land-contamination

Pembrokeshire County Council is has produced a strategy for contaminated land as required by Part2A of the Environment Protection Act 1990.

| Objectives and requirements | Implications for the LDP |
|---|---|
| The Council's aims for contaminated land will be as follows: 1. To Achieve Environmental Improvement 2. To Reduce the Council's Impact on the Environment 3. To Encourage Regeneration and Redevelopment 4. To Fulfil the Council's Responsibilities with Respect to Implementing Environmental Legislation 5. To raise awareness and promote understanding of land contamination issues | To reflect the aims and ensure they are compatible and supported in the plan. |

Biodiversity, Fauna and Flora

International/European

Convention on Wetlands of International Importance especially as Waterfowl Habitat (The Ramsar Convention, 1971)

http://www.ramsar.org/

Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979)

http://www.cms.int/

Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979)

EC Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna (92/43/EEC)

EU Directive on the Conservation of Wild Birds (2009/147/EC)

http://ec.europa.eu/environment/nature/legislation/birdsdirective/index_en.htm

The Convention on Biological Diversity, Rio de Janeiro (1992)

http://www.biodiv.org/default.shtml

Managing Natura 2000 sites - The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC

http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index en.htm

Our life insurance, our natural capital: an EU Biodiversity Strategy to 2020 (COM (2011) 244) Mid-term review (COM/2015/0478 final)

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52011DC0244

UK/National

UK Post-2010 Biodiversity Framework (2012)

http://jncc.defra.gov.uk/page-6189

The Post-2010 Biodiversity Framework replaces the former UK Biodiversity Action Plans (UKBAP). It represents a national strategy for the

| conservation of biological diversity and the sustainable use of biological resources. | |
|--|--|
| Objectives and requirements | Implications for the LDP |
| A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society. | The LDP should aim to conserve, promote and enhance species listed within the UKBAP. |
| B: Reduce the direct pressures on biodiversity and promote sustainable use. | Affected issues: Biodiversity, flora and fauna. |
| C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity. | Anotou issues: Bloarvorony, nora ana radna. |
| D: Enhance the benefits to all from biodiversity and ecosystems. | |
| E: Enhance implementation through participatory planning, knowledge management and capacity building. | |
| | |

The Conservation of Habitats and Species Regulations (2017)

http://www.legislation.gov.uk/uksi/2017/1012/regulation/1/made

Transposes the Habitats Directive (92/43/EEC), the Conservation of Seals Act 1970 into national law and elements of the EU Wild Birds Directive.

| Objectives and requirements | Implications for the LDP |
|---|---|
| These Regulations make measures for the implementation of the Habitats Directive, the designation of European sites and provides greater protection to these European sites (Natura 2000 sites) designated for their species and habitats. Competent authorities are required to make an appropriate assessment before undertaking, or giving any consent, permission or other authorisation for, a plan or project which is likely to have a significant effect on a European Site either alone or in combination with other plans or projects. This appropriate assessment is carried out in view of that site's conservation objectives. | There are 13 European designated protected areas in, partly in and adjoining Pembrokeshire (12 SACs, including candidate SACs and 1 SPA), therefore it is likely that the LDP will require screening in accordance with the Habitats Regulations. A HRA screening and appropriate assessment of the LDP will take place as necessary. |

The Conservation of Offshore Marine Habitats and Species Regulations 2017

https://www.legislation.gov.uk/uksi/2017/1013/contents/made

These regulations transpose into national law Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (<u>Habitats Directive</u>), and elements of Council Directive 2009/147/EC on the conservation of wild birds (<u>Wild Birds Directive</u>) in the UK offshore area. The regulation also consolidates the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 and introduces amendments which transfer responsibility for European nature conservation in the Welsh offshore region to Welsh Ministers.

| Objectives and requirements | Implications for the LDP |
|--|--|
| manage offshore marine habitats through guidance and secondary legislation | The Pembrokeshire Marine SAC covers the entire coastline; therefore, it is likely that the LDP will require screening in accordance with the Habitats Regulations. A HRA screening and appropriate assessment of the LDP will take place as necessary. |

Natural Environment and Rural Communities Act (2006)

https://www.legislation.gov.uk/ukpga/2006/16/contents

The act is designed to help achieve a rich and diverse natural environment and thriving rural communities through modernised and simplified arrangements for delivering government policy. It provides legislative changes to amend nature conservation legislation, and in relation to bylaws for motor vehicles (giving NPs the power to make traffic regulation orders); SSSIs and extends the CRoW biodiversity duty for example. The act also created a new integrated agency called Natural England, to act as a champion for the natural environment in England and the Commission for Rural Communities. In Wales the section 42 list on biodiversity has been replaced by the Environment (Wales) act (2016).

| Objectives and requirements | Implications for the LDP |
|--|---|
| Duty to conserve biodiversity, and have regard to Convention on Biological Diversity (1992). Reasonable steps to contribute to the conservation of the living organisms and types of | The LDP should aim to protect and enhance the natural environment and biodiversity. |
| habitat included in any list published under this section, or to promote the taking by others of | |

| such steps. | Affected issues: biodiversity, flora and fauna, |
|-------------|---|
| | landscape |

Wildlife and Countryside Act 1981 (as amended)

https://www.legislation.gov.uk/ukpga/1981/69

The act implements the Convention on the Conservation of European Wildlife and Natural Habitats (the 'Bern Convention') and the European Union Directives on the Conservation of Wild Birds and Natural Habitats. The Act is concerned with the protection of wildlife and their habitat (countryside, national parks and designated protected areas).

| Objectives and requirements | Implications for the LDP |
|---|--|
| Addresses the problem of species protection and habitat loss by setting out the protection that is afforded to wild animals and plants in Britain | There is significant interaction between wildlife and different types of land use. The SA should consider the effects of the plan on biodiversity. |
| | Affected issues: biodiversity, flora and fauna |

Technical Advice Note (TAN) 5: Nature Conservation and Planning (2009)

https://gov.wales/topics/planning/policy/tans/tan5/?lang=en

This advice note sets out how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. The TAN brings together advice on sources of legislation relevant to various nature conservation topics which may be encountered by local planning authorities.

| Objectives and requirements | Implications for the LDP |
|--|---|
| Local Planning Authorities should: | The LDP should aim to deliver biodiversity |
| pay particular attention to the principles of sustainable development; | objectives (maintain, protect and enhance) and other relevant objectives and targets. |
| contribute to the protection and improvement of the environment; | , , |
| promote the conservation and enhancement of statutorily designated areas and | It should avoid adverse impacts on designated |

undeveloped coast

- ensure that appropriate weight is attached to designated sites of international, national and local importance
- protect wildlife and natural features in the wider environment
- ensure that the range and population of protected species is sustained

areas, such as SSSIs, SPAs, SACs and others.

Affected issue: biodiversity

Technical Advice Note (TAN) 10: Tree Preservation Orders (1997)

https://gov.wales/topics/planning/policy/tans/tan10/?lang=en

Local planning authorities are empowered, in the interests of amenity, to protect trees and woodlands by making Tree Preservation Orders (TPOs).

| Objectives and requirements | Implications for the LDP |
|--|---|
| The Act places a duty on local planning authorities to make adequate provision where appropriate for the preservation and planting of trees when granting planning permission by imposing conditions and/or making TPOs. | The use of TPOs could be used to maintain and enhance biodiversity. |
| | Affected issue: biodiversity, landscape |

Glastir Sustainable Land Management Scheme (2012)

Launched by Welsh Government in 2012, it replaces Tir Gofal, Tir Cynnal and Tir Mynydd agri-environmental schemes.

| Objectives and requirements | Implications for the LDP |
|-----------------------------|---|
| The scheme has three aims: | Affected issue: biodiversity, landscape, soil |
| combating climate change: | |

- improving water management; and,
- · maintaining and enhancing biodiversity.

Woodland for Wales (March 2009)

https://beta.gov.wales/woodlands-wales-strategy

This 2009 update reaffirms the commitments of the 50 year vision published in 2001 and revisits some of the outcomes.

| Objectives and requirements | Implications for the LDP |
|--|---|
| Sets the vision that over the next 50 years "Wales will become known for its high quality woodlands that enhance the landscape, are appropriate to local conditions and have a diverse mixture of species and habitats." | The LDP should aim to protect and enhance traditional or native woodland areas. |
| | Affected issue: biodiversity, landscape, health and well being, soil |

Trunk Road Estate Biodiversity Action Plan (2004)

https://beta.gov.wales/trunk-road-estate-biodiversity-action-plan-trebap

Natural Recovery Plan for Wales (2015)

https://gov.wales/topics/environmentcountryside/consmanagement/conservationbiodiversity/?lang=en

The Nature Recovery Plan for Wales is aimed at addressing the underlying causes of biodiversity loss by:

- putting nature at the heart of our decision-making
- increasing the resilience of our natural environment
- taking specific action for habitats and species.

It sets out how Wales will deliver the commitments of the UN Convention on Biological Diversity and the EU Biodiversity Strategy to halt the decline in our biodiversity by 2020 and then reverse that decline.

| Objectives and requirements | Implications for the LDP | |
|--|--|--|
| Part 1 | The LDP should aim to protect and enhance biodiversity in order to contribute to the recovery plan. Affected issue: biodiversity, landscape, health and wellbeing, soil | |
| The Strategy for Nature sets out: | | |
| our commitment to biodiversity in Wales | | |
| the issues we need to address and our objectives for action. | | |
| It sets out how our current and proposed action, particularly through the Well-being of Future Generations (Wales) Act 2015, and through the Sustainable Management of Natural Resources, will contribute to reversing the loss of biodiversity in Wales. | and wellbeing, soll | |
| Part 2 | | |
| The Action Plan sets out those actions which have been specifically identified to meet our objectives to reverse the decline of biodiversity. Working groups for each objective will now further develop the detail under each of these actions, putting in place: | | |
| targets and milestones | | |
| identifying appropriate funding mechanisms | | |
| taking actions forward as appropriate. | | |
| Part 3 | | |
| (In development) the Nature Recovery Framework, will show: | | |
| the governance structure for the Nature Recovery Plan | | |
| the roles and responsibilities of everybody involved in the delivery of action for biodiversity in Wales | | |
| the accountability measures in place to ensure delivery. | | |

The State of Natural Resources Report (SoNaRR) 2016

https://naturalresources.wales/evidence-and-data/research-and-reports/the-state-of-natural-resources-report-assessment-of-the-sustainablemanagement-of-natural-resources/?lang=en

SoNaRR assesses the extent to which natural resources in Wales are being sustainably managed, and recommends a proactive approach to building resilience. The report also links the resilience of Welsh natural resources to the well-being of the people of Wales.

| Objectives and requirements | Implications for the LDP |
|--|---|
| To assess the sustainability of resource use in Wales. | The LDP must safeguard Pembrokeshire's natural resources within its remit, in particular, its minerals. |
| | Affected issues: all |
| Regional/Local | |

Pembrokeshire Marine Special Area of Conservation - Management Scheme (April 2008)

http://www.pembrokeshiremarinesac.org.uk/english/downloads/sitemandoc.htm

Draws together information needed for SAC management scheme. It ensures that the measures in the scheme are sufficient to meet the conservation objectives of the site and highlights where additional management may be required. This is a joint management scheme representing a collective effort by relevant authorities to meet their statutory requirements in relation to the SAC. Has the task of maintaining the important wildlife of the site whilst encouraging the site's use in a sustainable way, so as to meet the needs of its many users both now and into the future.

To assist in the conservation of wildlife and habitats throughout marine and coastal areas, whilst ensuring any necessary development is sustainable and does not significantly damage the environment.

Biodiversity Action Plan (BAP) for Pembrokeshire (2011)

https://www.pembrokeshire.gov.uk/biodiversity/pembrokeshire-nature-partnership-plans-and-guidance

This document covers Pembrokeshire County Council and Pembrokeshire Coast National Park areas. The Pembrokeshire LBAP has been drawn up in order to improve the status of sensitive habitats and species.

| Objectives and requirements | Implications for the LDP | |
|---|--|--|
| It identifies and sets action plans for species and habitats in the county, including information on their: | The LDP needs to ensure that biodiversity levels are protected and enhanced whilst | |
| Conservation Status | meeting development needs in the county. | |
| Threats to the population | | |
| Current action taken | Affected issues: biodiversity, flora and fauna | |
| Aim to improve the current status | | |
| Proposed actions | | |

Nature Recovery Action Plan for Pembrokeshire (2018)

As a result on the Nature Recovery Plan for Wales, Pembrokeshire County Council has produced a recovery plan for Pembrokeshire.

| Objectives and requirements | | Implications for the LDP | |
|-----------------------------|--|---|--|
| 1. | Engage and support participation and understanding to embed biodiversity throughout decision making at all levels. | The LDP needs to ensure that biodiversity levels are protected and enhanced whilst meeting development needs in the county. | |
| 2. | Safeguard species and habitats of principal importance and improve their management. | | |
| 3. | Increase the resilience of our natural environment by restoring degraded habitats and habitat creation. | Affected issues: biodiversity, flora and fauna | |
| 4. | Tackle key pressures on species and habitats. | | |
| 5. | Improve our evidence, understanding and monitoring. | | |
| 6. | Put in place a framework of governance and support for delivery. | | |
| | | | |

Pembrokeshire Greenways Strategy

http://www.pembrokeshiregreenways.co.uk/

State of Wildlife in Pembrokeshire Update 2016

https://www.pembrokeshire.gov.uk/biodiversity/pembrokeshire-nature-partnership-projects-and-reports

The Pembrokeshire Nature Partnership commissioned an update to the 2011 report. The document provides an update for 23 habitats and species with regard to their current status and future trends

| Objectives and requirements | Implications for the LDP |
|---|---|
| The objective of the report was to assess the condition of habitat, flora and fauna of Pembrokeshire. | The LDP will need to contribute to maintaining and improving biodiversity, with particular regard to sites allocated for development. |
| The report found that many of the habitats and species were in a poor state or in decline. | Affected issues: soil, water |

Pembrokeshire Towns: A green infrastructure action plan 2018

https://www.pembrokeshire.gov.uk/conservation

The conservation team in Pembrokeshire County Council commissioned a report to produce a list of key projects that could be undertaken in the 11 main settlements of Pembrokeshire to enhance the green infrastructure.

| Objectives and requirements | Implications for the LDP |
|--|--|
| The report produced over 200 potential projects for consideration. | The LDP will need to safeguard the areas required for any project that is progressed |
| | Affected issues: all |

Cultural Heritage, the Historic Environment, including Architectural and Archaeological Heritage

International/European

UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage (1972)

https://whc.unesco.org/en/conventiontext/

UK/National

Light Springs through the Dark: A Vision for Culture in Wales

https://gov.wales/topics/culture-tourism-sport/arts/a-vision-for-culture-in-wales/?lang=en

Partnership for Growth: strategy for tourism 2013-2020

https://gov.wales/topics/culture-tourism-sport/tourism/partnership-for-growth-strategy/?lang=en

The purpose of this strategy is to produce a framework for action by Wales Tourist Board and its partners to develop Wales' potential as a cultural tourism destination. The uniqueness of Wales' history, language and way of life are distinctive tourism assets which help differentiate Wales from the other countries of the UK.

| Objectives and requirements | Implications for the LDP |
|---|--|
| The strategy focuses on 5 key areas: | The LDP should aim to promote and support |
| promoting the Brandproduct Development | cultural tourism. |
| people Development | Affected issue: cultural heritage, economy |
| profitable Performanceplace Building. | |

| Ancient Monuments & Archaeological Areas Act 1979 | Implications for the LDP |
|---|--|
| https://www.legislation.gov.uk/ukpga/1979/46 | |
| The means by which Scheduled Ancient Monuments (SAMs) are afforded legal protection. A key tool for protection of SAMs. The protection given by this falls short of protecting the settings and surroundings of monuments. In addition, the Act allows for certain damaging operations to continue under certain circumstances. | Support and utilise the existing statutory UK framework for the protection of archaeological sites, but seek a strengthening of the legislation. |

The Historic Environment (Wales) Act 2016

https://gov.wales/topics/culture-tourism-sport/historic-environment/the-historic-env-wales-bill/?lang=en

The Welsh Government produced a Historic Environment Act to make changes to the Ancient Monuments and Archaeological Areas Act 1979 and the Planning (Listed Buildings and Conservation Areas) Act 1990.

| Objectives and requirements | Implications for the LDP |
|---|--|
| The Act: gives more effective protection to listed buildings and scheduled ancient monuments; improves the sustainable management of the historic environment; and introduces greater transparency and accountability into decisions taken on the historic environment. | The LDP should set the right framework for the protection and enhancement of historic assets. Affected issue: cultural heritage |

Technical Advice Note (TAN) 24: The Historic Environment (2017)

https://gov.wales/topics/planning/policy/tans/tan-24/?lang=en

Following The Historic Environment Act, a new TAN was produced. Three Welsh Office Circulars were also rescinded as a result.

| Objectives and requirements | Implications for the LDP |
|-----------------------------|---|
| 1 0 11 | The LDP should set the right framework for the protection and enhancement of historic assets. |

| Conservation areas, Historic parks and gardens, Historic landscapes and Historic assets of special local interest | Affected issues: cultural heritage | |
|---|---|--|
| Historic Environment Records in Wales guidance: Compilation and Use (May 2017); a | nd Standards and Benchmarks (May 2017) | |
| https://cadw.gov.wales/historicenvironment/recordsv1/historicenvironmentrecords/?lang=en | | |
| Statutory guidance under the powers in section 37 of the Historic Environment (Wales) Act (| 2017). | |
| Objectives and requirements | Implications for the LDP | |
| Local authorities in Wales must have regard to this guidance. | The LDP should set the right framework for the protection and enhancement of historic assets. | |
| | Affected issues: cultural heritage | |
| Welsh Historic Environment Records | | |
| https://www.archwilio.org.uk/arch/ | | |
| The Welsh Historic Environment Records is available online. Archwilio provides public access to the historic environment records (HERs) for each local authority area in Wales via four regional Welsh Archaeological trusts. | | |
| Objectives and requirements | Implications for the LDP | |
| The record provides information on the historic environment. The record provides a comprehensive index to archaeological and historical sites, finds and investigations of all | The LDP should set the right framework for the protection and enhancement of historic assets | |
| periods throughout Wales. | Affected issues: cultural heritage | |
| Overcoming the Barriers: Providing Access to Historic Buildings (Cadw, undated) | , | |

http://cadw.gov.wales/historicenvironment/help-advice-and-grants/makingchanges/disabilityaccess/?lang=en

Landscape and Townscape, including Light Pollution

International/European

European Landscape Convention

https://www.coe.int/en/web/landscape/publications

UK/National

Countryside and Rights of Way Act (CRoW) (2000)

https://www.legislation.gov.uk/ukpga/2000/37/contents

CRoW extends the public's ability to enjoy the countryside whilst also providing safeguards for landowners and occupiers. It creates a new statutory right of access to open country and registered common land, modernise the rights of way system, give greater protection to Sites of Special Scientific Interest (SSSIs), provide better management arrangements for Areas of Outstanding Natural Beauty (AONBs), and strengthen wildlife enforcement legislation. Emphasises the public's right of access to open country and common land, and gives additional protection to Sites of Special Scientific Interest (SSSI). The CRoW Act also introduces the requirement for preparation of Rights of Way Improvement Plans.

| Objectives and requirements | Implications for the LDP |
|---|---|
| Part I of the Act creates a new right of access to open country and registered common land; Part II of the Act modernises the law on public rights of way; Part III of the Act gives greater protection to sites of special scientific interest (SSSIs), | The LDP should aim through planning to maintain, improve and enhance biodiversity of the countryside, and respect public rights of way. |
| and strengthens wildlife protection; and Part IV of the Act provides new powers to set up Conservation Boards for the better management of Areas of Outstanding Natural Beauty (AONBs), and requires certain bodies to have regard for AONBs when doing anything which would affect the land in those areas. | Affected issue: landscape, population, biodiversity |

| Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales (Cadw and WG) http://cadw.gov.wales/historicenvironment/protection/historicparksandgardens/?lang=en | |
|--|--|
| Identifies areas of historic interest wholly or partly in the Plan area and the features of importance. | Contribute to conservation of areas and features identified in the register. |
| Technical Advice Note 7 - Outdoor Advertisement Control (1996) | |
| https://gov.wales/topics/planning/policy/tans/tan7/?lang=en | |
| The control regime specified by the Secretary of State enables local planning authorities to control virtually all outdoor advertisements in the interests of amenity and public safety. Some types of advertisement are exempted from detailed control, other specified categories of advertisement qualify for deemed consent, provided they conform to the stated conditions and limitations for each category. | |
| Objectives and requirements | Implications for the LDP |
| Local planning authorities may produce design guidance on outdoor advertisements and shopfronts, especially for conservation areas or where vernacular buildings play an important part in the appearance of a neighbourhood. Such guidance needs to recognise the importance of advertisements to the national economy and should not stifle original designs or new display techniques. | The LDP should seek to balance the need for outdoor advertising with its likely environmental and social implications. |
| Almost all advertisements on listed buildings or scheduled monuments will constitute an alteration to the building or the monument and, therefore, require listed building or scheduled monument consent in addition to any advertisement consent. | Affected issue: visual impacts and landscape character, economy |
| Technical Advice Note (TAN) 19: Telecommunications (2002) | Implications for the LDP |
| https://gov.wales/topics/planning/policy/tans/tan19/?lang=en | |
| The TAN sets out WG advice on telecommunication in relation to Development Plans and Development Management. | Affected issue: visual impacts and landscape character |

Regional/Local

Historic Landscape Characterisation of the Milford Haven Waterway on the Register of Landscapes of Outstanding Historic Interest in Wales (2002)

http://www.dyfedarchaeology.org.uk/HLC/milford/milfordhavenmap.htm

Since 1998, the Trust has been involved in work examining the historic character of areas defined by the Register of Landscapes of Historic Interest in Wales. This is part of an ongoing Pan-Wales project sponsored by Cadw and the Countryside Council for Wales.

Historic landscape characterisation involves the examination of historic processes that have shaped and moulded the present-day landscape. Components that make up the landscape such as field boundary types, field shapes, buildings, settlement patterns, parks and gardens, roads and railways, industry, and archaeological sites are all taken into consideration during characterisation.

By analysing all components, it is possible to divide the landscape into historic landscape character areas. Each area comprises components that are distinct from its neighbours.

Others - Sustainable development, Planning

International/European

The UN Millennium Declaration and the Millennium Development Goals (2002)

http://www.un.org/millennium/declaration/ares552e.htm

Rio Declaration on Environment and Development (1992)

http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm

World Summit on Sustainable Development, leading to the Johannesburg Plan of Implementation (2002)

http://www.un.org/ga/search/view_doc.asp?symbol=A/CONF.199/L.7&Lang=E

EU Environmental Impact Assessment Directive (85/337/EEC) Amended 14/52/EU

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014L0052

EU Public Participation Directive (2003/35/EC)

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32003L0035

EU Seventh Environment Action Programme (2013)

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32013D1386

The latest Environment Action Programme gives a strategic direction to the Commission's environmental policy over the next decade, as the Community prepares to expand its boundaries.

The new programme identifies four environmental areas to be tackled for improvements:

- Climate Change;
- Nature and Biodiversity;
- Environment and Health and Quality of Life; and
- · Natural Resources and Waste.

Objectives and requirements Implications for the LDP Recognises that land use planning and management decisions in the Member States can In developing policies, the plan makers need to have a major influence on the environment, leading to fragmentation of the countryside and be aware of these strategies and consider how pressures in urban areas and the coast. Also includes objectives on stabilising greenhouse their plan can influence positively issues such gases, halting biodiversity loss, reducing pollution and resource use. Under the EAP as air quality, the urban environment, natural framework, Thematic Strategies are being developed on: resource use and waste prevention and recycling. Air quality; Soil Protection: Affected issues: air, soil, water, material Sustainable use of Pesticides: assets, population, health and well being Marine Environment: Waste Prevention and Recycling; Sustainable Use of Natural Resources; and

Åarhus Convention (2001) Convention on access to information, public participation in decision-making and access to justice in environmental matters (2005)

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32005D0370

UK/National

Urban Environment.

Implementing the Sustainable Development Goals (2017)

https://www.gov.uk/government/publications/implementing-the-sustainable-development-goals/implementing-the-sustainable-development-goals

This strategy aims to promote sustainable development. It contains

- Five principles (with a more explicit focus on environmental limits);
- Four agreed priorities (sustainable consumption and production, climate change, natural resource production and sustainable communities); and
- · A new indicator set with new indicators such as on well being.

| Objectives and requirements | Implications for the LDP |
|--|--|
| The new objectives included within the strategy are: Living within environmental limits; Promoting good governance; and Using sound science responsibly. | To implement this strategy the LDP should aim to promote sustainable development wherever possible. Sustainability is a cross cutting theme of the Community Plan. Affected issues: all |

One Wales: A Progressive Agenda for the Government of Wales (An agreement between the Labour and Plaid Cymru Groups in the National Assembly 27th June 2007)

It offers a progressive agenda for improving the quality of life of people in all of Wales's communities, from all walks of life, and especially the most vulnerable and disadvantaged. Working together, Plaid Cymru and Labour have devised a programme of government which meets these challenges head on. Their ambition is to transform Wales into a self-confident, prosperous, healthy nation and society, which is fair to all.

| Objectives and requirements | Implications for the LDP |
|---|--|
| The One Wales provides a progressive agenda for Wales with themes of: • A strong and confident nation • A healthy future • A prosperous society • Living communities • Learning for life (education and skills) • A fair and just society | The LDP should have regard to the One Wales document. Many of the priorities in One Wales are reflected in other key plans which the community plan will reflect – e.g. commitment to tackle child poverty in CYPP is consistent with One Wales. |
| A sustainable environment A rich and diverse culture. | |
| The document also sets out governance arrangements for the coalition between the Labour and Plaid Cymru groups in the National Assembly. | |

Environment Strategy for Wales (2006)

https://gov.wales/topics/environmentcountryside/epg/envstratforwales/strategy/?lang=en

This is the Welsh Government's long-term strategy for the environment of Wales. The purpose of the strategy is to provide the framework within which to achieve an environment that is clean, healthy, biologically diverse and valued by the people of Wales. The strategy focuses on five environmental themes: addressing climate change; sustainable resource use; distinctive biodiversity, landscapes and seascapes; our local environment; and environmental hazards. The report is monitored annually and action plans produced.

| Objectives and requirements | Implications for the LDP |
|---|---|
| Addressing climate change: | The LDP should aim to contribute to the |
| Minimise greenhouse gas emissions; and | achievements of these commitments by setting appropriate objectives and measures. |
| Improve resilience to the impacts of climate change. | Special attention should be paid to: |
| Sustainable use of resources: | Resource efficiency |
| Minimise amount of waste generated; universal acceptance of principle of reduce, re-use and recycle; reduce waste going to landfill; | Climate change mitigation and adaptation |
| Design products for minimal waste and high resource use efficiency; | Protection of soils as carbon stores |
| Manage water resources sustainably without causing environmental damage; Increase water efficiency and maintain water quality; | Potential carbon offsetting for new developments |
| Manage soil resources to safeguard its ability to support life; and | Flood risk |
| Minimise environmental impact of extracting minerals and aggregates; use alternative materials or recycled aggregates where possible. | Diffuse water pollution (run-off) |
| Distinctive biodiversity, landscapes and seascapes: | Loss of biodiversity, fragmentation of habitats |
| Halt the loss of biodiversity, and begin to see recovery; improve biodiversity in wider | Changes to landscape character |
| environment through appropriate management; Improve condition of SSSI sites; | And inter-linkages between these issues |

The Community Plan's reflects the issues

- Manage our seas to support clean and healthy ecosystems that are biologically diverse and productive; and
- Maintain and enhance quality and diversity of landscape and seascape character.

Our local environment:

- Built environment reflects local distinctiveness and supports strong communities; easy and equitable access to open space; widespread and equitable access to the countryside;
- New buildings in Wales to meet high environmental quality standards; maintain historic building stock to high standards;
- Minimise environmental nuisances such as litter, graffiti, noise pollution etc;
- Increasing numbers of people choose to walk or cycle for transportation; and
- Manage risk of flooding from rivers and the sea, and how to adapt to that risk.

Environmental hazards:

- Reduce air pollution; undertake remedial action on identified contaminated land;
- Maintain and enhance quality of water sources; understand and manage diffuse pollution sources; and
- Minimise the risk posed by exposure to chemicals.

Planning Policy Wales (Edition 9, 2017)

https://gov.wales/topics/planning/policy/ppw/?lang=en

Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes and National Assembly for Wales / Welsh Office circulars. PPW, the TANs and circulars together comprise national planning policy which should be taken into account by local planning authorities in Wales in the preparation of local development plans (LDPs). In addition, PPW sets out a commitment to sustainable development.

above, especially in its promoting a clean, healthy and valued environment priority.

Affected issues: climatic factors, water, air quality, landscape, biodiversity, flora and fauna, material assets

| Objectives and requirements | Implications for the LDP |
|---|---|
| Several key policy objectives are set out: Promote resource efficient settlement patterns; Minimise the demand for travel; Contribute to climate protection/ promotion of renewable energy; Minimise the risk of flooding; Promoting sustainable communities; Contribute to the protection and improvement of the environment, so as to improve the quality of life, and protect local and global ecosystems. In particular, planning should seek to ensure that development does not produce irreversible harmful effects on the natural environment. The conservation and enhancement of statutorily designated areas and of the countryside and undeveloped coast; the conservation of biodiversity, habitats, and landscapes; the conservation of the best and most versatile agricultural land; and enhancement of the urban environment all need to be promoted; Help to ensure the conservation of the historic environment and cultural heritage; and Minimise the use of non-renewable resources and maximise efficiencies in their use. | The LDP should contribute to these objectives by promoting renewable energy, higher resource efficiency, protecting the environment, and ultimately establishing locally distinct, sustainable communities. Affected issues: material assets, climatic factors, water, biodiversity, cultural heritage |

Draft Planning Policy Wales (Edition 10, N/A)

https://beta.gov.wales/planning-policy-wales-edition-10

The Welsh Government are currently drafting PPW edition 10. Unlike previous PPW updates the WG have issued a consultation, largely due to the changes being proposed.

| Objectives and requirements | Implications for the LDP |
|---|---|
| PPW 10 aims to: | The LDP should contribute to these objectives |
| To put placemaking at the centre of development plans and development management, and thereby create active and social places; productive and | by promoting placemaking. |

| enterprising places; distinctive and natural places; and Integrate the 5 ways of working from the well-being and future generations into the planning system. | Affected issues: all |
|--|----------------------|
| Technical Advice Note (TAN) 3: Simplified Planning Zones (1996) | |
| https://gov.wales/topics/planning/policy/tans/tan3/?lang=en | |

Pembrokeshire Planning and Supplementary Planning Guidance

Pembrokeshire County Council Local Development Plan (Adopted 2013)

Provides a framework for development and planning decisions within the area cover by Pembrokeshire County Council for the period 2013 – 2021.

| Objectives and requirements | Implications for the LDP |
|--|--------------------------|
| The LDP2 will replace the first LDP and is informed by a fresh evidence base. The Pembrokeshire Coast National Park is preparing a separate replacement LDP. | Affected issues: all |

Pembrokeshire Coast National Park Management Plan 2015-2019

Sets the direction for the Park's work programmes and those of its partners.

- Sets the vision for the future of the PCNP with targets and objectives
- Reports on the current position of the PCNP
- Identifies opportunities and threats
- Identifies partner's current and future roles
- Features key projects and initiatives

Pembrokeshire Coast National Park Local Development Plan 1 (Adopted 2010)

https://www.pembrokeshirecoast.wales/default.asp?PID=178

Pembrokeshire Coast National Park Local Development Plan 2 (Deposit 2018)

http://www.pembrokeshirecoast.wales/default.asp?PID=835

The Pembrokeshire Coast National Park has prepared a separate Local Development Plan which will guide development and planning decisions taken in the National Park. It was adopted in October 2010. The National Park's replacement LDP is currently at deposit stage.

Planning decisions will be made in accordance with the Local Development Plan unless The council is encouraged to develop its LDP in material considerations indicate otherwise. The Local Development Plan will therefore close liaison with the National Park to ensure provide the essential framework for rational and consistent decision making. the two plans are compatible with each other and support the same key issues affecting Pembrokeshire. Initial work on the next version of the Community Plan will highlight issues raised by the PCNPA LDP. Affected issues: all Pembrokeshire County Council Supplementary Planning Guidance on Parking Standards (2013) ittps://www.pembrokeshire.gov.uk/adopted-local-development-plan/ldp-supplementary-planning-guidance This SPG set out the parking requirements for the various land uses. **Objectives and requirements** Affected issues: transport To ensure adequate parking is provided for all developments Pembrokeshire County Council Supplementary Planning Guidance on Biodiversity (2014) nttps://www.pembrokeshire.gov.uk/adopted-local-development-plan/ldp-supplementary-planning-guidance **Objectives and requirements** Affected issues: biodiversity This SPG aims to: Assist in ensuring that the key principles of national planning policy and guidance on biodiversity and nature conservation are met fully at the local level; Assist in ensuring that local planning decisions do not result in adverse impacts on species and habitats and protect and enhance biodiversity in Pembrokeshire; Ensure compliance with good practice; Secure timely consideration of ecological issues from the outset and, in so doing, streamline the application process to minimise cost and delay;

• Integrate Pembrokeshire's Local Biodiversity Action Plan into the planning process.

Pembrokeshire County Council Supplementary Planning Guidance on Affordable Housing (2015)

https://www.pembrokeshire.gov.uk/adopted-local-development-plan/ldp-supplementary-planning-guidance

The SPG addresses affordable housing in Pembrokeshire. All housing sites are applicable for affordable housing, with the percentage of a site required to be affordable set by the settlement that the development site is located in, as set out in appendix 2 of the SPG. This SPG explains the options for providing affordable housing, and who qualifies for affordable housing.

| Objectives and requirements | Implications for the LDP |
|---|--|
| The affordable housing to be provided by developers under these planning policies will be either: Affordable Housing for Rent OR Low Cost Home Ownership. The guidance sets out who the affordable housing should be provided for and how it will be kept affordable. | The LDP should have regard to the SPG on affordable housing. |
| The SPG contains guidance on: | Affected issues: Population |
| Affordable housing for rent | |
| Low cost home ownership | |
| The provision of land | |
| Off site provision | |
| Self build with community land trusts | |

Pembrokeshire County Council Supplementary Planning Guidance on Planning Obligations (2016)

https://www.pembrokeshire.gov.uk/adopted-local-development-plan/ldp-supplementary-planning-guidance

This guidance document sets the thresholds at which a section 106 agreement is required for various infrastructure and facilities that would be required as a result of a given development.

| Objectives and requirements | Implications for the LDP |
|---|---|
| To provide new or expand infrastructure and facilities for new developments | Affected issues: population, education, |

| | transport, social fabric, water, biodiversity, landscape |
|--|--|
| Pembrokeshire County Council Supplementary Planning Guidance on Renewable Energhttps://www.pembrokeshire.gov.uk/adopted-local-development-plan/ldp-supplementary-planni | |
| Objectives and requirements | Implications for the LDP |
| The aim of the SPG is to: | Affected issues: economy, biodiversity, |
| Assist and guide applicants and agents regarding information required at pre-application and planning application stages; | heritage, landscape |
| Assist case officers and planning committee members in making informed decisions on renewable energy applications; and | |
| Help ensure that the benefits resulting from renewable energy generation are balanced with economic, social and amenity impacts on local communities, and with environmental effects, including those on biodiversity and visual and landscape considerations. | |
| Pembrokeshire County Council Supplementary Planning Guidance on Development Sith https://www.pembrokeshire.gov.uk/adopted-local-development-plan/ldp-supplementary-planni | |
| This SPG provides information for perspective developers of the sites allocated in the LDP. | |
| Objectives and requirements | Implications for the LDP |
| The ultimate aim of the SPG is to aid the delivery of allocated sites by providing site specific information to potential developers. | Affected issues: all |

Neighbouring Authorities Plans

Ceredigion County Council Local Development Plan 2013-2021

Ceredigion County Council Local Development Plan 2 2021-2033

Ceredigion County Council adopted it's LDP in 2013. It is currently developing a replacement Local Development Plan which will guide development and planning decisions taken in the County of Ceredigion.

Planning decisions will be made in accordance with the Local Development Plan unless material considerations indicate otherwise. The Local Development Plan will therefore provide the essential framework for rational and consistent decision making.

The council is encouraged to be aware of the neighbouring authorities' LDPs to ensure the two plans are compatible with each other and support the same key issues.

Affected issues: all

Carmarthenshire Local Development Plan 2014-2021

Carmarthenshire Local Development Plan 2 2021-2033

Carmarthenshire County Council adopted it's LDP in 2014. It is currently developing a replacement Local Development Plan which will guide development and planning decisions taken in the County of Carmarthen.

Planning decisions will be made in accordance with the Local Development Plan unless material considerations indicate otherwise. The Local Development Plan will therefore provide the essential framework for rational and consistent decision making.

The council is encouraged to be aware of the neighbouring authorities LDP's to ensure the two plans are compatible with each other and support the same key issues.

Affected issues: all

APPENDIX 2: Baseline data (Part 1)

Please note that this is a working document and will be updated periodically, and is split over 3 documents. Topics:

- 1. Population
- 2. Human health
- 3. Education and skills
- 4. Transport
- 5. Social Fabric including housing, affordability, Welsh language, crime,
- 6. Economy including activity, employment, labour demand, business, GVA, agriculture, tourism and recreation, communications.
- 7. Climatic factors including resource efficiency, climate change scenarios
- 8. Air quality
- 9. Material Assets including waste, minerals and aggregates, ecological footprint, energy.
- 10. Water quality and quantity, flooding
- 11. Soil including contaminated land, agricultural land.
- 12. Biodiversity, Fauna and Flora protected sites and condition.
- 13. Cultural Heritage, Historic Environment and Landscape including listed buildings, conservation areas, landscape.

1. Population

Population facts and figures

The population of Pembrokeshire, excluding areas in the National Park, was 91,589 at the Census in 2001. The population of the entire County at the last Census (2011) was 122,439. This has increased from 114,131 which is 3.9% of the Wales population of 2,903,085 in 2001 and 3,063,500 in 2011 (ONS, 2011).

Welsh Government Population and Household Projections (from PCC LDP AMR)

- The implications of the 2011-based Local Authority Population and Household Projections for Wales, which reflect the data from the 2011 Census, were discussed in the first AMR. The latest 2014-based population and household projections were released on 23rd March 2017.
- The LDP housing requirement is derived from the Welsh Government's (WG) 2008-based household projections. These were a starting point for the figures, but the LDP makes provision for 1,605 dwellings more than the 5,724 units required, to allow

for choice, flexibility and renewal of the existing housing stock and for non-take up of sites. Both the 2011 and 2014-based population projections had a higher base population than the 2006 and 2008 based population projections as a result of data from the 2011 census being used, rather than the 2001 census.

• The following graphs show the differences between the 2006, 2008, 2011 and 2014 population and household projections for Pembrokeshire:

Figure 1: Projected Population

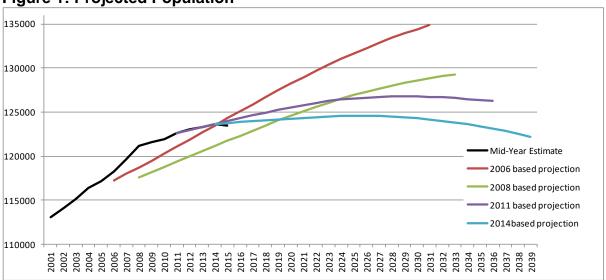
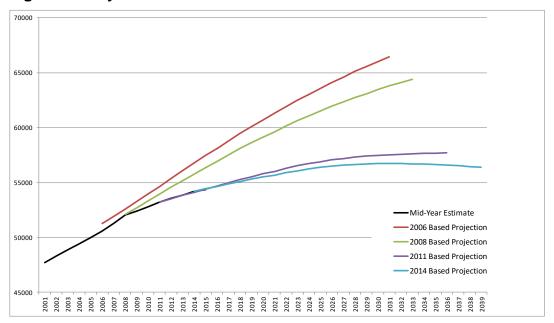


Figure 2: Projected Households



The following table shows the differing components in the projections:

| Table 1: Projection | | | | |
|-------------------------------------|------------|------------|------------|------------|
| Component 2017-18 | 2006 Based | 2008 Based | 2011 Based | 2014 Based |
| Births | 1317 | 1250 | 1306 | 1198 |
| Deaths | 1380 | 1283 | 1338 | 1352 |
| General Fertility Rate ¹ | 68.92401 | 67.54566 | 68.34118 | 63.56802 |
| Crude Death Rate ² | 10.96247 | 10.44015 | 10.73655 | 10.9098 |
| NetMigrInt | 785 | 594 | 299 | 268 |
| NetMigrOvs | 65 | 11 | 54 | -17 |

¹ number of live births per 1,000 women aged 15 to 44

² number of deaths per 1,000 population

Comparison of the projections

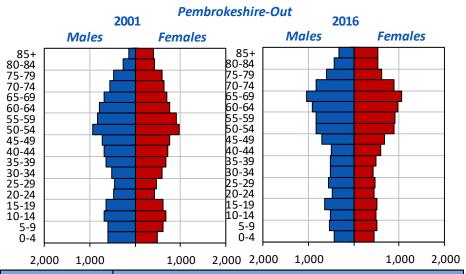
- In summary the lower population forecast in the 2014 based projection, compared with the previous projections are due to fewer births and more deaths and lower expected numbers of net migrants (due to lower numbers in the previous five years).
- It is also worth noting that the four population projections produced by the Welsh Government (2006 based, 2008 based, 2011 based and 2014 based each show lower forecast rates of population growth than the previous (see chart).
- Population will grow until 2029 but then decline.
- In 2033 there will be more people aged over 65 and fewer young people so a need for more housing for older people.
- Households will be smaller in size (more 1 person) and there will be more households than now.

During the preparation of LDP 2, there will be a need for the Authority to assess carefully the implications of the most recent projections in determining its housing land provision.

Population profile

Between 2001 and 2016, the proportion of the population aged 65+ living in Pembrokeshire-Out 2.8increased from 18% to 24%. Whilst this is closely aligned to the Unitary Authority in 2016 (25%), it is higher than Wales (20%) but lower than PCNP (30%) (Figure 3). Whilst the 2016 MYE for Pembrokeshire-Out records a younger age profile than the National Park, it indicates an older and more rapidly ageing population age profile than evidenced at national level (Demographic Study, Edge Analytics, 2018).

Population age profile 2016 (Figure 3)



| | 2016 MYE | | | | |
|----------------|----------------|-----|---------------------|-------|--|
| Indicator | Coast National | | Pembrokeshire UA | Wales | |
| Percentage 65+ | 24% | 30% | 25% | 20% | |
| Percentage 80+ | 6% | 8% | 7% | 5% | |
| OAD | 40% | 53% | 42% | 32% | |
| Median Age | 46 | 53 | 47 | 42 | |

OAD = Old Age Dependency Ratio

(Population Aged 65+/Population Aged 15–64)

Source: Edge Analytics Demographic Study, 2018

Pembrokeshire Out is the area excluding the Pembrokeshire Coast National Park Authority

Pembrokeshire has a population of 122,439 (2011 Census); though it should be noted the County's population can increase by 100% as a result of summer tourism. The population density is 0.8 people per hectare.

Table 2: Age distribution of Pembrokeshire's population, 2001 and 2011

| POPULATION (Number and Percentage) BY AGE, 2001 & 2011 | | | | | |
|--|--------|----------|--------|------|--|
| Age Band | 200 |)1 | 20 | 11 | |
| | Number | Number % | | % | |
| 0 - 15 | 23,394 | 20.5 | 22,077 | 18 | |
| 16 to 74 | 80,763 | 70.8 | 88,049 | 71.9 | |
| 75 and over | 9,974 | 8.7 | 12,313 | 10.1 | |

Source: 2011 Census

Under the official WG 2014-based population projection for Pembrokeshire UA, Pembrokeshire-3.8Out and PCNP, the 16–64 age group represents the greatest proportion of the total population in both 2017 and 2033 for each area, however it is the older 65+ age groups that are expected to experience the greatest increase (Table 3).

Table 3

| Ago | 2017 | | 2033 | | | |
|--------------|---------------------|----------------------|--------|---------------------|----------------------|--------|
| Age Group | Pembrokeshire UA | Pembrokeshire Out | PCNP | Pembrokeshire UA | Pembrokeshire Out | PCNP |
| 0–15 | 21,195 | 18,212 | 3,013 | 20,034 | 17,770 | 2,423 |
| 16–64 | 71,417 | 59,224 | 12,169 | 63,985 | 55,066 | 8,971 |
| 65+ | 31,344 | 24,373 | 6,982 | 39,803 | 32,061 | 7,590 |
| TOTAL | 123,957 | 101,810 | 22,165 | 123,822 | 104,898 | 18,983 |

Source: Edge Analytics Demographic Study, 2018

Life Expectancy

Table 4: Life expectancy in Pembrokeshire and Wales

| | | Male | Female |
|-----------|---------------|------|--------|
| 1995-1997 | Pembrokeshire | 74.3 | 79.7 |
| | Wales | 74.0 | 79.2 |
| 1997-1998 | Pembrokeshire | 74.5 | 79.6 |
| | Wales | 74.5 | 79.5 |
| 1998-2000 | Pembrokeshire | 74.9 | 79.7 |
| | Wales | 74.8 | 79.7 |
| 2002-2004 | Pembrokeshire | 76.0 | 80.5 |
| | Wales | 75.8 | 80.3 |
| 2003 | Pembrokeshire | 76.1 | 80.5 |
| | Wales | 75.8 | 80.3 |
| 2011 | Pembrokeshire | 78.8 | 82.7 |
| | Wales | 78.0 | 82.2 |

Source: ONS, 2011

Population Future Trend

Life expectancy in Pembrokeshire is continuously higher for both males and females than the national average and is increasing at the same rate.

Sources

ONS, 2001 Census (Life Expectancy at Birth, 2002-2004), and 2011 Census

Ethnicity - 2001 and 2011

Table 5: Ethnicity in 2001 and 2011

| | 2001 | | 2011 | |
|------------------------------|-------|-------|-------|-------|
| | Pembs | Wales | Pembs | Wales |
| White | 99.1 | 97.9 | 98.1 | |
| Mixed/multiple ethnic groups | 0.3 | 0.6 | 0.6 | |
| Asian or Asian British | 0.3 | 0.9 | 1.0 | |
| Black/African/Caribbean/ | 0.1 | 0.3 | 0.1 | |
| Black British | | | | |
| Other ethnic group | 0.2 | 0.4 | 0.2 | |

| % from Ethnic Minority Group | 0.9 | 2.0 | 1.9 | |
|------------------------------|------|-----|------|-----|
| Percentage Identifying | 13 | 14 | | 3.7 |
| themselves as Welsh | | | | |
| Percentage of people born | 31.3 | | 33.1 | |
| outside Wales | | | | |

Data Gaps and Uncertainties

None Identified

Sources

ONS, 2001 Census (Map 49, National SEA of WSP)

ONS, 2001 Census (KSO6A – Ethnic Group and Identification as Welsh)

ONS, 2011 Census https://www.nomisweb.co.uk/reports/localarea?compare=1946157391

 $\frac{\text{http://www.neighbourhood.statistics.gov.uk/dissemination/LeadTableView.do?a=3\&b=276866\&c=pembrokeshire\&d=13\&e=15\&g=4}{15946\&i=1001x1003x1004\&m=0\&r=1\&s=1216908611988\&enc=1\&dsFamilyId=15}$

Nomisweb.co.uk https://www.nomisweb.co.uk/census/2011/KS201EW/view/1946157391?cols=measures

Welsh Index of Multiple Deprivation (WIMD)

Pembrokeshire has the 3rd greatest percentage of Lower Super Output Areas (LSOAs) in the most deprived 10% of areas for the Access domain, based on access to key services by bus and/or on foot (Single Needs Assessment, 2012).

Percentage of people living in most deprived areas

The 2014 Welsh Index of Multiple Deprivation is made up of separate measurements into a single number; Income, Employment, Health, Education, Access to Services, Community Safety, Physical Environment and Housing. Rankings are based on the level of deprivation. A rank of one is the most deprived. The Access to Services domain of the WIMD considers access to: a food shop; GP surgery; primary school; post office; public library; leisure centre; NHS dentist; and secondary school.

Previous rankings in 2005 and 2008 were made up of different components and cannot therefore be compared with subsequent rankings.

In 2005 it was made up of separate domains; income (25%), employment (25%), health (15%), education, skills and training (15%), housing (5%), physical environment (5%) and geographical access to services (10%). The table also shows the ranking of the electoral divisions in Wales.

The deprivation scores from the 2008 index can't be compared with those from 2005, but are provided for information. The parts that make up the index are different, and the indexes were worked out in different ways. But even if these changes had not been made, comparisons would still not be valid. An area's score is affected by the scores of every other area; so it is impossible to tell whether a change in score is a real change in the deprivation level of an area, or whether it is due to the scores of other areas going up or down (WAG, 2008).

Table 6: Welsh Index of Multiple Deprivation in Pembrokeshire and Wales

| | 2005 | 2005 | 2008 | 2014 | 2014 |
|-----------------------------|----------------------------|------------------------------|----------------------------------|-----------------------------|---------------------------------------|
| Ward | Pembs Ranking (1-71) | Welsh Ranking (1-1896) | Welsh Ranking (2008) (1-1896) | Pembs Ranking (of 71) | Welsh Ranking 2014 (of 1909) |
| Pembroke Dock: Llanion 1 | 1 | 55 | 71 | 1 | 67 |
| Pembroke: Monkton | 2 | 76 | 92 | 2 | 80 |
| Haverfordwest: Garth 2 | 3 | 200 | 222 | 3 | 104 |
| Milford: West | 4 | 290 | 372 | 6 | 363 |
| Milford: Hubberston 2 | 5 | 332 | 358 | 4 | 173 |
| Pembroke: St Mary North | 6 | 350 | 343 | 7 | 411 |
| Haverfordwest: Castle | 7 | 417 | 441 | 9 | 488 |
| Pembroke Dock: Central | 8 | 456 | 417 | 5 | 201 |
| Milford: East | 9 | 536 | 589 | 10 | 508 |
| Pembroke Dock: Pennar 1 | 10 | 580 | 596 | 8 | 487 |

In 2014, of the 10% most deprived Lower Super Output Areas (LSOA) in Wales, 4 are within the Pembrokeshire County Council area. This accounts for 5.6% of those in the local authority and 0.2% of those in Wales.

Table 7: % of LSOA in most deprived area in Pembrokeshire

| % of LSOA in most | 2011 | 2014 |
|-------------------|------|------|
| deprived area | | |
| 10% | 4 | 6 |
| 20% | 9 | 8 |
| 30% | 14 | 15 |
| 50% | 39 | 37 |

Number of LSOAs = 71

Source: http://wimd.wales.gov.uk/geography/la/W06000009?lang=en#&min=0&max=20&domain=overall

The overall methodology used within WIMD 2014 is the same as used for WIMD 2011. The domains have also remained the same. There have been a small number of changes to individual indicators (or the inclusion of new indicators) within the Income, Education, Access to Services, Community Safety, Physical Environment and Housing domains; as well as some technical changes to some of the individual domains.

https://gov.wales/docs/statistics/2015/150812-wimd-2014-revised-en.pdf

A ranking system cannot be used to monitor change over time. This is because it is not known whether a change in rank for an area is due to changes in that area itself, or to other areas moving up or down the ranks, changing its position without actual change in the area.

Table 8: Working-age client group - key benefit claimants (February 2007)

| | Pembrokeshire (numbers) | Pembrokeshire (%) | Wales (%) |
|---------------------|-------------------------|-------------------|--------------|
| Total claimants | 11,720 | 17.5 | 19.3 |
| Job seekers | 1,360 | 2.0 | 2.6 |
| Incapacity benefits | 6,640 | 9.9 | 11.2 |

| Lone parents | 1,290 | 1.9 | 2.2 |
|-----------------------------------|-------|-----|-----|
| Carers | 1,040 | 1.6 | 1.4 |
| Others on income related benefits | 320 | 0.5 | 0.5 |
| Disabled | 820 | 1.2 | 1.2 |
| Bereaved | 240 | 0.4 | 0.3 |

Source: DWP benefit claimants - working age client group Note: % is a proportion of resident working age people

Sources

Welsh Index of Multiple Deprivation – Local Authority Analysis Revised 8th December 2005 Welsh Index of Multiple Deprivation – 2008

http://new.wales.gov.uk/topics/statistics/headlines/compendia2008/hdw20080709/?lang=en

Nomis – www.nomisweb.co.uk

Pembrokeshire is the one of the fifth highest areas in Wales with a larger proportion of housing benefits claimants. This can reflect a combination of low numbers of hours or poorly paid work as well as higher costs of renting

Source: Joseph Rowntree Foundation, Monitoring Poverty and Social Exclusion in Wales, 2015

Migration

Between 2011 and 2016 net migration averaged approximately 390 per year from within the UK and approximately 80 per year from outside the UK between 2012 and 2016 ³⁴. There is an aging population in Pembrokeshire partly as a result of migration and people are living longer. This may affect the demand for housing for older people.

Table 9: Sources of population change in Pembrokeshire, 2001 - 2005

| Pembrokeshire County Council | | | | | |
|------------------------------|--------|--------|--------|--------|--|
| | 2001/2 | 2002/3 | 2003/4 | 2004/5 | |
| | | | | | |
| Births | 1090 | 1150 | 1160 | 1200 | |
| Deaths | 1350 | 1380 | 1330 | 1420 | |

³ https://statswales.gov.wales/Catalogue/Population-and-Migration/Migration/Internal/migrationbetweenwalesandrestofuk-by-localauthority-flow-periodofchange

⁴ https://statswales.gov.wales/Catalogue/Population-and-Migration/Population/Components-of-Change/componentsofpopulationchange-by-localauthority-component

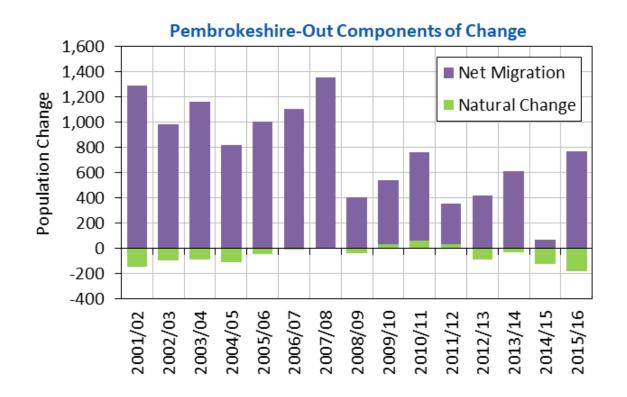
| Natural Change | | -260 | -230 | -180 | -210 |
|--------------------------|-----|------|------|------|------|
| | | | | | |
| Internal Migration | In | 4460 | 4440 | 4210 | 3870 |
| | Out | 3510 | 3480 | 3440 | 3290 |
| | Net | 950 | 960 | 760 | 580 |
| | | | | | |
| International Migration | In | 890 | 660 | 370 | 120 |
| (International Passenger | | | | | |
| Survey) | Out | 290 | 300 | 60 | 190 |
| | Net | 600 | 360 | 310 | -70 |

Source: LHMA (2007)

Net migration of 16-24 year olds 1999-2001, Pembrokeshire: -8.5% Net migration of 25-44 year olds 1999-2001, Pembrokeshire: 2.1%

Welsh average for 16-24 year olds 1999-2001: -1.0% Welsh average for 25-44 year olds 1999-2001: 0.3%

Pembrokeshire (excluding the PCNPA) components of change 2001/02-2015/16



Source: Edge Analytics Demographic Study, 2018

Trends

Young people are moving out of Pembrokeshire and older/retired people are moving in, causing the population to age and contributing to the expensive housing market.

Sources:

- Pembrokeshire County Council Local Housing Market Assessment
- Edge Analytics Demographic Study, 2018

Population Issues

- Population Change projections are lower.
- Aging population.

The LDP should have regard to reducing poverty in line with UK and Welsh strategies. The LDP should have regard to promoting social inclusion and supporting sustainable communities. Planning can be guided by demographic structure such as an ageing population which will require residential care and health services and can also ensure that housing and infrastructure are suitable for any growth or change in populations. Planning should be accessible and inclusive so it reflects the needs of the whole population. The plan should seek to address the issue of Pembrokeshire's ageing population which also links in with encouraging younger people to stay in the County.

2. Human health

Health provision in Pembrokeshire

There are 15 GP practices in Pembrokeshire and 29 pharmacies, mainly located in the main towns.

Withybush hospital in Haverfordwest is the County's only general hospital, healthcare provisions are part of a review by the Hywel Dda University Health Board. There are two community hospitals at Pembroke Dock and Tenby.

Long term illness

A limiting long-term illness covers any long-term illness, health problem or disability that limits daily activities or work. According to data from the 2001 Census, in the whole of Pembrokeshire there were 25,477 people with a long-term illness, which equates to 22.332% of the population of the County.

This compares to in the 2011 Census: 122,439 total

13,970 day to day activities limited a little

13,587 day to day activities limited a lot

97,882 day to day activities not limited

Sixteen percent of people in Pembrokeshire state that they are limited a lot by a health problem/disability (15% in Wales) (Welsh Health Survey, 2015).

Note that the National Survey for Wales was used from 2016 onwards, therefore data before this date (pre April 2016) are not comparable/compatible with data from 2016 onwards.

Table 10: Percentage of population with a long-term limiting illness in 1991 and 2001, and 2011 Pembrokeshire and Wales:

| | Pembrokeshire | Wales |
|-------|---------------|-------|
| 1991 | 14.5% | 17.1% |
| 2001 | 22.3% | 23.3% |
| 2011* | 22.5% | 22.7% |

^{*}The question on long term limiting illness in the 2001 census was not the same as the 2011 question, therefore these are not directly comparable, but still offer indicative insights on change over time. The 2011 questions related to whether day to day activities are limited a lot, a little, or not limited. For this purpose, the limited a lot and a little are grouped.

Source

Office for National Statistics – 1991, 2001 and 2011 Census data https://statswales.gov.wales/Catalogue/Census/2011/LimitingLongTermIllnessDisability-by-LocalAuthority

Obesity levels

Table 11: Adults who were overweight or obese⁵ in Pembrokeshire (%)

| Year | | Observed | | | Age- standardised |
|---------|-------|----------|--------|--------|----------------------|
| | | Male | Female | Person | Person |
| 2003/05 | Pembs | 61 | 51 | 56 | 55 |
| | Wales | 59 | 49 | 54 | 54 |
| 2005/06 | Pembs | 65 | 51 | 58 | 57 |
| | Wales | 60 | 50 | 55 | 55 |
| 2005/07 | Pembs | 68 | 52 | 60 | 58 |
| | Wales | 61 | 51 | 56 | 56 |
| 2007/08 | Pembs | 64 | 57 | 60 | 59 |
| | Wales | 62 | 52 | 57 | 57 |
| 2016/17 | Pembs | | | 63 | |
| | Wales | | | 59 | |

Source WAG: http://wales.gov.uk/topics/statistics/theme/health/health-survey/results/?skip=1&lang=en

% of adults who were overweight or obese in 2007/08 = 59%, compared with 57% in Wales. 2016/17 onwards not comparable as survey changed (National Survey)

Source: Welsh Health Survey: 2003/05 Local Authority Report, National Assembly for Wales

National Survey for Wales 2016/17

The percentage of respondents, with 0 or 1 healthy behaviours (see below for description) Pembrokeshire 9%

Wales 10%

⁵ Reported Body Mass Index (BMI) of 25+. BMI is calculated as weight (kg) divided by squared height (m²).

Healthy behaviours:
Not smoking
Healthy weight
Eat 5 fruit or veg
Not drinking above guidelines
Active

Table 12: Lifestyle issues

| Lifestyle Issue | 200 | 3/05 | 200 | 5/07 | 2008 | 3/09 | 10/11 | | 12/13 | | 14/15 | |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| - | Pembs | Wales |
| | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| Being a smoker | 25 | 27 | 23 | 25 | 21 | 24 | 24 | 23 | 21 | 22 | 16 | 20 |
| Consuming alcohol above guidelines limit | 38 | 40 | 31 | 36 | 39 | 45 | 38 | 44 | 37 | 42 | 36 | 40 |
| Binge drinking at least 1 day in last week | 16 | 19 | 17 | 20 | 21 | 28 | 22 | 27 | 20 | 26 | 19 | 24 |
| Eating 5 or more portions of fruit/vegetables the previous day | 43 | 40 | 50 | 46 | 39 | 36 | 38 | 34 | 37 | 33 | 36 | 32 |
| Meeting physical activity guidelines in last week | 32 | 29 | 32 | 30 | 34 | 29 | 32 | 30 | 33 | 29 | 33 | 31 |
| Overweight or obese | 56 | 54 | 60 | 56 | 63 | 57 | 56 | 57 | 56 | 58 | 63 | 58 |

Source: Welsh Government Statistics: WHS 2003-2015

https://gov.wales/docs/statistics/2016/160622-welsh-health-survey-trends-2003-04-04-2015-en.xlsx

Road collisions & safety

Table 13: Killed or seriously injured casualties in Pembrokeshire and Wales from 1994-2016.

| Road collisions (fatal or seriously injured) | 1994- 1998 average | 2001- 2004 av | 2005- 2008 av | 2009- 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|--|--------------------------|---------------------|---------------------|---------------|-------|-------|-------|------|------|
| Pembrokeshire | 90 | 91 | 75 | 68 | 54 | 60 | 61 | 62 | 52 |
| Wales | 1,623 | 1,331 | 1,153 | 1,148 | 1,144 | 1,263 | 1,186 | 975 | 670 |

Source: Road Casualties Wales: 2006, WG and Welsh Transport Statistics

http://new.wales.gov.uk/topics/statistics/publications/rcw2006/?lang=en

http://wales.gov.uk/topics/statistics/publications/transport2009/?lang=en

https://gov.wales/docs/statistics/2015/150909-road-safety-2014-en.xls

https://statswales.gov.wales/Catalogue/Transport/Roads/Road-Accidents/accidents/ksiroadaccidents-by-area-year

Health Issues

- Obesity
- Aging population and impact on health services, access to appropriate housing

The planning system and Local Development Plan can generally only play a minor role in improving health by ensuring policies protect and provide for recreation facilities and encourage healthier alternatives to using cars.

The SA objective therefore takes account of the following key areas:

- · Promote healthy living
- Reduce health inequalities
- Encourage walking, cycling and physical activity
- Improve access to open space
- Minimise impacts on health and well-being from road traffic incidents
- Minimise the health impacts from pollution.

3. Education and skills

Number of schools and pupils

In 2016/17 in Pembrokeshire (**including** the National Park area) there were 61 primary schools and 8 secondary schools (one welsh language), 1 special school with post-16 provision.

In 2009 there were 65 primary schools (2009), a reduction of 21 since 1998. In addition there were eight secondary schools, one of which provided a Welsh-medium education. Pembrokeshire College in Haverfordwest is the only further education establishment in the County.

Table 14: Pupil numbers in full time primary and secondary education in Pembrokeshire schools

| | 2006 | 2007 | 2008 | 09/10 | 10/11 | 11/12 | 12/13 | 13/14 | 14/15 | 15/16 | 16/17 |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Primary | 10,229 | 10,128 | 10,142 | 10,344 | 10,345 | 10,324 | 10,328 | 10,569 | 10,624 | 10,730 | 10,650 |
| Secondary | 8,728 | 8,527 | 8,361 | 8,285 | 8,108 | 7,999 | 7,841 | 7,639 | 7,327 | 6986 | 6,806 |
| Total | 18,957 | 18,655 | 18,503 | 18,629 | 18,453 | 18,323 | 18,169 | 18,208 | 17,951 | 17,716 | 17,456 |

Source: Annual statutory school census (PLASC returns)

https://statswales.gov.wales/Catalogue/Education-and-Skills/Schools-and-Teachers/Schools-Census/Pupil-Level-Annual-School-Census/Pupils/pupil-by-localauthorityregion-typeofschool

Further and higher education centres

Pembrokeshire College offers full and part time academic and vocational courses. The College provides HND, HNC and degree level education as an Accredited College of the University of Glamorgan.

Adult education facilities

'Learning Pembrokeshire' is Pembrokeshire County Council's programme of adult education. The Council aims to provide a varied range of courses to suit its customers - Pembrokeshire residents and businesses.

Courses are held at many different locations around the County.

Source:

PCC - https://www.pembrokeshire.gov.uk/our-courses

Level of Qualifications

Table 15: Percentage of people aged 16-74 years old highest qualification attained⁶ in 2001 and 2011

| Highest level attained | | Percenta | ge of individuals | |
|-----------------------------------|---------------|----------|-------------------|-------|
| | 2001 | 1 | 201 | 1 |
| | Pembrokeshire | Wales | Pembs | Wales |
| No Qualifications | 31.1 | 33.0 | 24.6 | 25.9 |
| Highest Level 1 | 16.0 | 15.5 | 13.6 | 13.3 |
| Highest Level 2 | 22.2 | 19.8 | 16.8 | 15.7 |
| Highest Level 3 | 6.0 | 7.0 | 11.8 | 12.3 |
| Highest Level 4/5 | 17.0 | 17.4 | 24.8 | 24.5 |
| Other qualification/level unknown | 7.7 | 7.2 | 8.45 | 4.3 |

Source: Census 2001 and 2011

NOMIS, ONS annual population survey

Education & Skills Issues

• Increase in people attaining level 3 and level 4/5 since the 2001 census.

The plan should have regard to supporting sustainable communities and improve access to services, including education and provide suitable skills training to enable the population to enter meaningful employment.

The LDP can ensure that land is available to provide or policies enable the provision of good quality education facilities are available with opportunities for skills and knowledge development.

The SA objectives should therefore address the issue of low skills in the area, by improving access to education and life-long learning and training opportunities, this will develop a strong skills base for employers. This objective will also contribute towards improving employment opportunities and economic activity, which in turn will improve the quality of life of the population.

⁶ All people aged 16 to 74 who were usually resident in the area at the time of the 2001 Census, whose highest qualification attained: Level 1: 1+'O' level passes; 1+ CSE/GCSE any grades; NVQ level 1; or Foundation level GNVQ.

Level 2: 5+'O' level passes; 5+ CSE (grade 1's); 5+GCSEs (grades A-C); School Certificate; 1+'A' levels/'AS' levels; NVQ level 2; or Intermediate GNVQ.

Level 3: 2+ 'A' levels; 4+ 'AS' levels; Higher School Certificate; NVQ level 3; or Advanced GNVQ.

Level 4/5 qualifications: First Degree, Higher Degree, NVQ levels 4 and 5; HNC; HND; Qualified Teacher Status; Qualified Medical Doctor; Qualified Dentist; Qualified Nurse; Midwife; or Health Visitor.

4. Transport

Road traffic

Table 16: Volume of traffic on major roads by Unitary Authority (billion vehicle km)

| Area | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Pembrokeshire | 0.99 | 1.01 | 1.02 | 1.04 | 1.07 | 1.08 | 1.09 | 1.08 | 1.06 | 1.05 | 1.04 |
| Carmarthenshire | 1.71 | 1.73 | 1.75 | 1.78 | 1.89 | 1.94 | 1.93 | 1.89 | 1.86 | 1.84 | 1.83 |
| Ceredigion | 0.68 | 0.71 | 0.71 | 0.70 | 0.71 | 0.73 | 0.71 | 0.71 | 0.70 | 0.70 | 0.68 |
| WALES | 26.06 | 26.40 | 27.07 | 26.98 | 27.63 | 27.99 | 27.88 | 27.49 | 26.98 | 23.93 | 26.76 |

These figures show that there is an annual gradual rise, then gradual reduction from 2009 in volume of traffic, both in Pembrokeshire and through Wales. Traffic in Pembrokeshire accounted for 3.8% of traffic on major roads in Wales in 2012.

Source:

WG, 2018

https://gov.wales/docs/statistics/2013/130924-monitoring-national-transport-plan-update-2012-en.pdf

Households without a car

Table 17: The percentage of households without a car or van in Pembrokeshire and other areas (2001 and 2011 census)

| | 2001 | 2011 |
|-----------------|------|------|
| Pembrokeshire | 21.7 | 17.9 |
| Ceredigion | 19.5 | 18.4 |
| Carmarthenshire | 23.1 | 18.8 |
| Wales | 26.0 | 22.9 |

Source:

Census 2001, 2011, Car or Van table KS17 & KS404EW

https://www.nomisweb.co.uk/census/2011/KS404EW/view/1946157391?cols=measures

Travelling to work

Table 18: The method of travel to work used by all employed persons aged 16-74, in the whole of Pembrokeshire and Wales (2001 & 2011):

| | | 20 | 01 | | 2011 | | | | |
|------------------------------|-----------|----------|-----------|---------|-----------|----------|-----------|----------|--|
| Method of travel | Pembro | keshire | Wal | es | Pembro | keshire | W | ales | |
| | Number of | % of | Number of | % of | Number of | % of | Number | % of | |
| | persons | employed | persons | persons | persons | employed | of | employed | |
| | | persons | | | | persons | persons | persons | |
| Driving a car or van | 25,793 | 57.45 | 726,363 | 61.23 | 35,649 | 65.75 | 918,645 | 67.37 | |
| Passenger in a car or van | 3,672 | 8.18 | 106,526 | 8.98 | 3,434 | 6.33 | 92,727 | 6.80 | |
| Underground, metro, light | , | | , | | 43 | 0.08 | 1,175 | 0.09 | |
| rail, tram | | | | | | | | | |
| Train | 169 | 0.38 | 14,619 | 1.23 | 232 | 0.43 | 27,341 | 2.01 | |
| Bus, coach or mini bus | 1,353 | 3.01 | 62,322 | 5.25 | 1,606 | 2.96 | 62,903 | 4.61 | |
| Bicycle | 364 | 0.81 | 16,389 | 1.38 | 475 | 0.88 | 19,659 | 1.44 | |
| On foot | 5,190 | 11.56 | 122,732 | 10.35 | 6,427 | 11.85 | 145,135 | 10.64 | |
| Motorcycle, scooter or | 332 | 0.74 | 8,888 | 0.75 | 358 | 0.66 | 7,694 | 0.56 | |
| moped | | | | | | | | | |
| Taxi | 199 | 0.44 | 5,975 | 0.50 | 221 | 0.41 | 6,523 | 0.48 | |
| Other | 448 | 1.00 | 7,119 | 0.60 | 512 | 0.94 | 8,673 | 0.64 | |
| Work at home | 7,377 | 16.43 | 115,323 | 9.72 | 5,260 | 9.70 | 73,140 | 5.36 | |
| Total (all people aged 16-74 | | | · | | | | | | |
| in employment) | 44,897 | | 1,186,256 | | 54,217 | | 1,363,615 | | |

Census data 2001, 2011, KS15 -Travel to work table, QS701EW

Source:

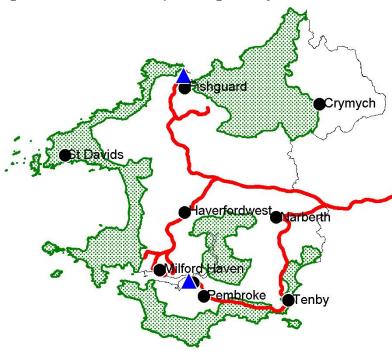
Census, 2001, 2011

Rail travel & links

Figure 4 indicates the rail infrastructure in Pembrokeshire (red line) and the passenger ferry terminals in the County (blue triangles). Commercial services currently provided by Arriva Trains Wales run approximately every few hours to Milford Haven and Pembroke

Dock and twice a day to Fishguard Harbour on weekdays. The weekend timetable is significantly reduced. The infrastructure also extends to existing/disused large industrial sites at Milford Haven, Waterston and Trecwn.

Figure 4: Rail links and passenger ferry terminals



Passenger numbers with a valid ticket beginning and/or ending their journey at Pembrokeshire train stations in the financial year 2005/06:

Table 19

| Station | | Passeng | er numbers | | | | | | | |
|---------------|---|---------|------------|---------|---------|---------|--|--|--|--|
| | 2004/05 2005/06 2006/07 2007/08 15/16 16/17 | | | | | | | | | |
| Haverfordwest | 114,021 | 110,023 | 116,960 | 127,227 | 136,346 | 133,496 | | | | |
| Tenby | 76,695 | 75,629 | 84,598 | 94,231 | 118,338 | 123,314 | | | | |
| Milford Haven | 39,750 | 40,899 | 45,935 | 51,559 | 64,034 | 64,092 | | | | |
| Pembroke Dock | 30,056 | 30,439 | 35,758 | 41,148 | 49,362 | 46,710 | | | | |

| Fishguard & | | | | | 19,946 | 19,600 |
|-----------------|------------|------------|------------|-------------|------------|------------|
| Goodwick | | | | | , | , |
| Fishguard | 28,303 | 23,873 | 29,049 | 24,755 | 22,646 | 18,600 |
| Harbour | | | | | | |
| Pembroke | 21,477 | 22,513 | 24,424 | 25,217 | 28,446 | 29,844 |
| Clunderwen | 12,709 | 12,430 | 14,297 | 17,439 | 24,128 | 24,212 |
| Narberth | 10,321 | 11,140 | 13,556 | 15,547 | 20,922 | 19,924 |
| Kilgetty | 7,794 | 8,221 | 9,607 | 12,103 | 16,194 | 15,438 |
| Johnston | 6,974 | 5,197 | 4,658 | 4,980 | 8,704 | 8,364 |
| Saundersfoot | 4,560 | 4,001 | 5,081 | 6,177 | 7,900 | 8,384 |
| Penally | 4,339 | 5,289 | 5,031 | 4,569 | 5,444 | 5,332 |
| Manorbier | 4,265 | 4,009 | 4,443 | 5,452 | 9,648 | 9,428 |
| Clarbeston Road | 3,011 | 3,210 | 3,802 | 4,127 | 10,138 | 9,208 |
| Lamphey | 2,646 | 2,552 | 2,936 | 4,291 | 5,732 | 5,556 |
| | | | | | | |
| Carmarthen | 295,860 | 294,208 | 323,233 | 348,329 | 419,794 | 426,890 |
| Cardiff Central | 8,403,835 | 8,357,732 | 9,126,923 | 9,875,269 | 12,744,582 | 12,534,884 |
| London Waterloo | 66,342,182 | 61,036,093 | 83,993,314 | 100,306,690 | 99,148,388 | 99,403,096 |

Future Trend

In Network Rail's investment programme for 2019-2024 Pembrokeshire has not been earmarked as the recipient of any substantial engineering projects, bar minor feasibility studies for diverting traffic away from two open crossings.

Source:

Network Rail – https://cdn.networkrail.co.uk/wp-content/uploads/2018/02/Wales-Route-Strategic-Plan.pdf
Office of Rail and Road, Estimates of Station Usage https://orr.gov.uk/statistics/published-stats/station-usage-estimates

Sea passenger movements between Pembrokeshire and Ireland

Table 20: Sea Passenger movements to/from Ireland (numbers in thousands):

| | 2001-05 | 2006-10 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------|---------|---------|-------|-------|-------|-------|-------|-------|
| Fishguard | 639.6 | 531 | 410 | 367 | 333 | 351 | 327 | 298 |
| Pembroke Dock | 371.6 | 339.4 | 313 | 329 | 328 | 322 | 335 | 339 |
| WALES | 3,452 | 2,946.2 | 2,802 | 2,591 | 2,615 | 2,686 | 2,632 | 2,564 |

The figures show that sea travel is declining in terms of numbers of passengers in the County and throughout Wales.

Milford Haven continues to be Wales' busiest port ahead of Holyhead this growth is in part due to the LNG development at Milford Haven.

Source:

Sea passengers https://statswales.gov.wales/Catalogue/Transport/Sea

Air transport

Haverfordwest Airport is situated two miles north of Haverfordwest. The airport is mainly used for private aircraft and organised pleasure flights although a specialist air charter service is based there.

Trunk Roads/Length of Highways

The County's highway network comprises the following classifications and distances: Table 21

| Type of road | Length (km) |
|----------------------|-------------|
| Trunk Roads | 120 |
| County roads - urban | 495 |
| County roads - rural | 1956 |

Source: Pembrokeshire County Council

Trunk roads in the County form strategic routes into Pembrokeshire from the east and north:

- The A40(T) (from the County boundary at Whitland towards Fishguard);
- The A477(T) (from the County boundary east of Llanteg to Pembroke Dock);
- The A4076(T) (from Haverfordwest to Milford Haven);
- Part of the A487(T) (between Fishguard and Cardigan).

Sources:

Pembrokeshire County Council - https://www.pembrokeshire.gov.uk/road-maintenance Trunk road agency websites https://www.southwales-tra.gov.uk/4721

Transport Issues

- Rurality of the county, use of cars
- Increase in car/van used to travel to work.

The LDP has a key role in transport planning as it is a means of safeguarding the lines of key road improvements / transport infrastructure sites. The LDP can also influence and encourage development near sustainable transport connections and encourage healthier lifestyles through providing for increased exercise, sport and play facilities. The Plan should also ensure compliance with legislation and promote wider public participation.

5. Social Fabric

Housing

Housing Stock

Table 22 and 23: Dwelling stock estimates by tenure in Pembrokeshire and Wales, 2004 and 2016/17

| 2004 | Rented from local authorities | Rented from registered social landlords | Owner-occupied, privately rented and other tenures | Total |
|---------------------------|-------------------------------|---|--|-----------|
| Pembrokeshire | 5,980 | 1,932 | 46,127 | 54,039 |
| % of total dwelling stock | 11% | 4% | 85% | |
| Wales | 162,276 | 64,295 | 1,069,229 | 1,295,800 |
| % of total dwelling stock | 12.5% | 5% | 82.5% | |

| 2016/17 | Rented from Local Authorities | Rented from registered social landlords | Owner occupied, privately rented and other tenures | Total |
|---------------------------|----------------------------------|---|--|-----------|
| Pembrokeshire | 5,659 | 2,457 | 53,998 | 62,114 |
| % of total dwelling stock | 9% | 4% | 87% | |
| Wales | 87,222 | 138,596 | 1,193,553 | 1,419,371 |
| % of total dwelling stock | 6% | 10% | 84% | |

Source:

Stats Wales, Welsh Government: https://statswales.gov.wales/Catalogue/Housing/Dwelling-Stock-Estimates/dwellingstockestimates-by-localauthority-tenure

Table 24: Housing Need - All Pembrokeshire – Current Need (2007 & 2012)

| | C: Current Need | | | | |
|--------|---|-------------------|-------|--|--|
| | | 2007 | 2012 | | |
| 1. | Existing households in need of alternative housing | 3330 ⁷ | 3270 | | |
| 2. | Plus Current non-households in need | 198 | 0 | | |
| 3. | Minus cases where they can afford to meet their needs in the market | Nil | 0 | | |
| 4. | TOTAL CURRENT HOUSING NEED | 3528 | 3270 | | |
| A: Ava | lable Stock to Offset Need | | | | |
| 5. | Current occupiers of Affordable Housing in Need | 832 | 402 | | |
| 6. | Plus surplus stock | Nil | 0 | | |
| 7. | Plus committed supply of new affordable housing units | 129 | 73 | | |
| 8. | Minus planned units to be taken out of management | 97 | 3 | | |
| 9. | Equals Total available stock to meet current need | 864 | 472 | | |
| 10. | TOTAL CURRENT NEED | 2664 | 2798 | | |
| 11. | Times quota to progressively reduce levels of current need | 5% | 10% | | |
| 12. | Equals ANNUAL NEED TO REDUCE LEVEL OF CURRENT NEED | 133.2 | 280 | | |
| N: New | ly Arising Need | | | | |
| 13. | New Household Formation (gross per annum) | 446 | 564 | | |
| 14. | Times proportion of households unable to buy or rent on the market | 55.47% | 42.8% | | |

⁷ Included 30 persons on the register not currently living in Pembrokeshire

| 15. Plus existing households falling into need | 1376* | 1574 |
|--|-------|------|
| 16. Minus potential out- migrants unable to afford market | Nil | 0 |
| housing | | |
| 17. Plus in-migrants unable to afford market housing | Nil | 0 |
| 18. Equals newly arising need | 1623* | 1815 |
| S: Supply of Affordable Housing Units per year | | |
| 19. Net Supply of social re-lets | 350 | 435 |
| 20. Plus supply of intermediate housing available for re-let / | Nil | 4 |
| resale at submarket levels | | |
| 21. Equals Affordable Supply | 350 | 439 |
| NET SHORTFALL OR SURPLUS | | |
| 22. Overall shortfall or surplus | 1406 | 1656 |

Source: Local Housing Market Assessment 2007 and 2012

https://www.pembrokeshire.gov.uk/adopted-local-development-plan/evidence-base

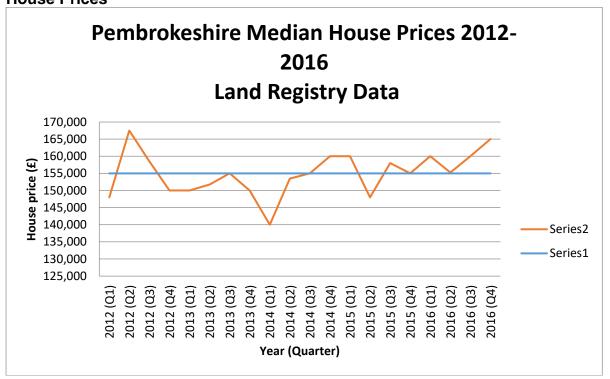
Housing need 2014

Total affordable rented = 1450.4

Low cost home ownership = 288.7

Source LHMA update on housing need per year 2014-2019

House Prices



£155,000 is the base price for 2012 (Series 1) Median house prices (Series 2)

Source: Land Registry Price Paid (Pembrokeshire County Council Annual monitoring report 2016-2017) https://www.pembrokeshire.gov.uk/objview.asp?object_id=3783&language=

Table 25: House price indicators

| Indicator | 2007 | 2008 | 2009 | 2010 |
|-----------------------|----------|----------|----------|----------|
| Mean | £189,493 | £185,340 | £177,443 | £180,607 |
| Median | £169,000 | £160,000 | £160,000 | £163,750 |
| Upper Quartile Median | £230,000 | £222,250 | £215,000 | £225,000 |
| Lower Quartile Median | £128,475 | £123,000 | £124,850 | £120,000 |

Source: Local Housing Market Assessment 2012

https://www.pembrokeshire.gov.uk/adopted-local-development-plan/evidence-base

The percentage of second / holiday homes recorded in Pembrokeshire in the 2001 Census was 6.1% which had remained unchanged following the 1991 Census. In the 2011 Census this rose to 6.9% (ONS)

https://www.ons.gov.uk/peoplepopulationandcommunity/housing/bulletins/2011censusnumberofpeoplewithsecondaddressesinlocal authoritiesinenglandandwales/2012-10-22

https://www.nomisweb.co.uk/census/2011/QS417EW/view/1946157391?rows=rural_urban&cols=cell

Affordability

The following table looks at the net household income required to service the mortgage of the most recent lower quartile house price. The calculation has used a 'typical' first time buyer with a 5% deposit looking to repay over 25 years, initially with a fixed interest rate, from a national mortgage lender.

| Table 26: Assessment of Affordability Lower Quartile House Price | | | | |
|--|-------------|--|--|--|
| Lower Quartile House Price | £120,000.00 | | | |
| 95% of Lower Quartile House Price | £114,000.00 | | | |
| 5% Deposit | £6,000.00 | | | |
| Interest rate for first 5 years ₂ | 6.44% | | | |
| Interest rate for remaining term | 3.99% | | | |
| Overall APR | 5.40% | | | |
| First 60 months monthly payment | £765.46 | | | |
| Affordability Calculator Net monthly household | £2551.53 | | | |
| income to service mortgage at 30%3 | | | | |
| Net annual household income to service mortgage | £30,618.36 | | | |
| at 30% | | | | |

In looking at the range of earnings for households this would mean that it is only those earning more than £30,000 that are likely to be able to purchase a property.

Household Income shows that the majority of households have an income less than £30,000 as shown below:

| Table 27: Income | 2007 | 2008 | 2009 | 2010 |
|---------------------------------|------|------|------|------|
| % households with income < £30K | 63.4 | 63.9 | 62.4 | 65.1 |
| % households with income > £30K | 36.6 | 36.1 | 37.6 | 34.9 |

Source: Local Housing Market Assessment 2012

https://www.pembrokeshire.gov.uk/adopted-local-development-plan/evidence-base

Table 28: Affordable Housing – Current Need (comparing 2012 with 2007)

| S: Supply of Affordable Housing Units per year | , | |
|---|------|------|
| | 2007 | 2012 |
| 19. Net Supply of social re-lets | 350 | 435 |
| 20. Plus supply of intermediate housing available for re-let / resale at submarket levels | Nil | 4 |
| 21. Equals Affordable Supply | 350 | 439 |
| NET SHORTFALL OR SURPLUS | | |
| 22. Overall shortfall or surplus | 1406 | 1656 |

The application of this formulaic approach to assessing housing shortfall surplus indicates the following shortfall of affordable housing over the four areas:

All Pembrokeshire Shortfall of 1656 units per annum

Sheltered Housing

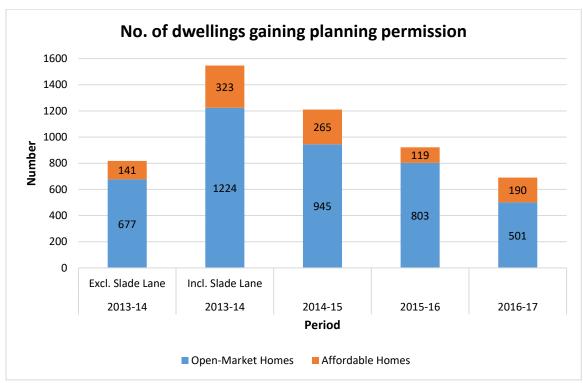
% Housing Stock: Social Rented = 14.7%

Privately Rented/Owned = 85.3%

Table 45: Social Rented Stock 2012 (LHMA 2012)
Total supply of social housing = 8,085
Pembrokeshire County Council = 5,673 (70%)
Pembrokeshire Housing Association = 2,094 (26%)
Cantref = 318 (4%)

Housing Land Availability

5.1 year land supply in the County Council plan area (AMR, 2016-2017)



Source:

Pembrokeshire County Council LDP AMR 2016-2017

Homelessness

| | Total Outcomes 2016/2017 | 7 | | | | |
|---------------|--|---|---|--|--|-------------------|
| | Households assessed as homeless and owed duty to secure - Number (Section 73) | Households assessed as homeless and owed duty to secure – Rate per 10,000 households (Section 73) | Households successfully relieved from Homelessness – Number (Section 73) | Households successfully relieved from Homelessness – Percentage (%) (Section 73) | Households successfully relieved from Homelessness - Rate per 10,000 households (Section 73) | Total Outcomes |
| Wales | 10884 | 81.682187 | 4500 | 41.339704 | 33.767174 | 28731 |
| Pembrokeshire | 342 | 63.14433 | 180 | 52.478134 | 33.136966 | 1071 |

https://statswales.gov.wales/Catalogue/Housing/Homelessness/reliefofhomelessness-by-area-measure-section73

There were 266 need to update people awaiting permanent accommodation at the end of April 2008 (Pembrokeshire County Council, 2008). UPDATED figures awaited.

Table 29: Households found to be eligible for assistance, unintentionally homeless and in priority need (2016/17)

| | 2008 | | 2016/17 | |
|---|-------|-------|---------|-------|
| | Pembs | Wales | Pembs | Wales |
| Household includes dependent child(ren) | 261 | 4,042 | 18 | 864 |
| Household member pregnant and no other dependent children | 24 | 723 | 6 | 102 |
| Vulnerable household member: old age | 25 | 386 | | 36 |
| Vulnerable household member: Physical disability | 46 | 434 | 18 | 210 |
| Vulnerable household member: Mental illness/learning disability | 34 | 679 | 15 | 372 |
| Vulnerable household member: other | | | 3 | 30 |
| Care leaver or person at risk: 18-20 yrs old | 8 | 188 | 6 | 69 |
| Young person at risk: 16-17 yrs old | 65 | 985 | 6 | 63 |

| Total | 537 | 10,040 | 78 | 2,076 |
|--|-----|--------|----|-------|
| | | | | |
| Household homeless in emergency | 5 | 397 | | 6 |
| A former prisoner who is vulnerable as a result of being held in custody | 32 | 785 | | 84 |
| Homeless after leaving armed forces | 4 | 43 | | |
| Threat/Cases of domestic violence | 27 | 1,310 | 3 | 237 |

Source: Stats Wales

https://statswales.gov.wales/Catalogue/Housing/Homelessness/Statutory-Homelessness-Prevention-and-Relief/households-found-to-be-eligible-for-assistance-unintentionally-homeless-and-in-priority-need-during-the-year-categories-of-priority-need-by-type-of-household-section-75-

Access to services

The wellbeing assessment was prepared for the Wellbeing Plan required under the Wellbeing of Future Generations (Wales) Act.

https://www.pembrokeshire.gov.uk/public-services-board/well-being-assessment

The Wellbeing assessment informed the well-being plan, which was also subject to a public consultation. There is a wealth of information in the wellbeing assessment and the results of the stakeholder engagements.

The Council are currently consulting on a new model of access to services. This is due to close in June 2018.

There are 38% of LSOAs in the most deprived 10% in Wales for the Access to Services domain in 2011 (Welsh Index of Multiple Deprivation (WIMD)). This was 36.6% in the 2014 WIMD.

Pembrokeshire County Council also surveyed its Community Panel on their experiences of accessing key services, and the results are shown here:

Table 30

| Accessibility. Very easy or fairly easy | Low difference in rural/urban | High difference in rural/urban |
|---|--|--|
| 90%+ | Local Schools Park / open space Pharmacy | Shopping facilities GP |
| 80% - 89% | Recycling facilities Place of work Sport or Leisure centre | Library Public transport |
| 70% - 79% | Civic amenity site | Council Office Childcare Local Hospital Cultural facility |

Source: Pembrokeshire County Council internal report - Access to Services Report 2006

WIMD Wales http://wimd.wales.gov.uk/geography/la/W06000009?lang=en#&min=0&max=10&domain=services

Welsh Language

The 2001 and 2011 Censuses asked residents aged over 3 years to state whether they were able to speak Welsh; 110,182 residents in 2001 and 118,392 in 2011:

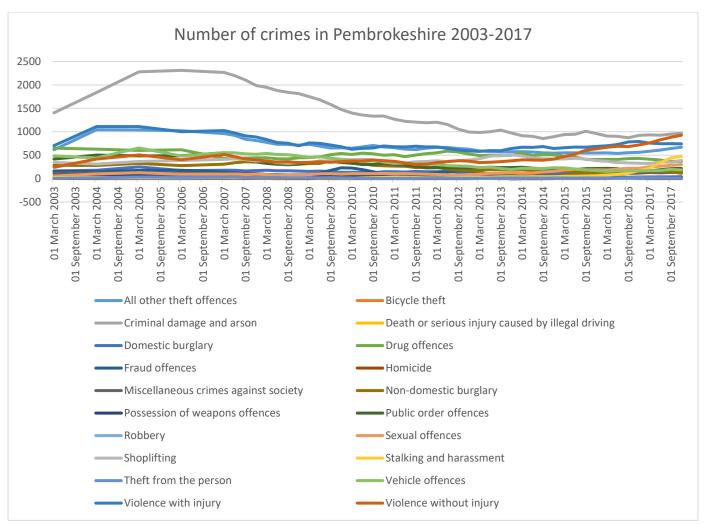
Table 31

| | 2001 | | 2011 | |
|-------------------------|----------------|-------------------|----------------|--------------------|
| | Pembs | Wales | Pembs | Wales |
| Able to speak Welsh | 23,967 (21.8%) | 582,368 (20.8%) | 22,786 (19.2%) | 562,016 (19%) |
| Not able to speak Welsh | 86,215 (78.2%) | 2,223,333 (79.2%) | 95,606 (80.8%) | 2,393,825 (81%) |

StatsWales https://statswales.gov.wales/Catalogue/Welsh-Language/WelshSpeakers-by-LA-BroaderAge-2001And2011Census

Crime – Recorded Crime Figures

Recorded crime figures are presented for 2003-2017 by type of crime. Recorded crime figures for Community Safety Partnerships which equates in the majority of instances to local authorities. The data are rolling 12 month totals, with data points shown at the end of each financial year between year ending March 2003 and year ending March 2007 and at the end of each quarter from June 2007. The data cover local authority boundaries from April 2009 onwards and local authority area names correspond to community safety partnership areas.



https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/datasets/recordedcrimedataatcommunitysafetypartnershiplocalauthoritylevel

https://www.police.uk/dyfed-powys/137/performance/compare-your-area/

Social Fabric Issues

• Increase in dwelling stock, but reduction in LA rental dwelling stock, and increase in rental stock with registered social landlords.

- Housing shortfall of 1406 (2007) and 1656 (2014) (units per annum).
- High house prices, affordability.
- Second homes.
- Housing land availability 5.1 year (LDP AMR).
- Access to services.

The LDP needs to have regard to improving access to services, reducing crime, improving housing including addressing affordable housing issues and housing for all sectors.

Where new housing is built or allocated, provision for school places should be made.

The Plan should also ensure compliance with EU legislation and promote wider public consultation, participation and access to environmental information. Land use planning can also reduce noise conflicts by ensuring suitable distances between sources of noise and sensitive receptors.

The SA objectives should ensure that the housing needs of the County are addressed. Housing should be resource efficient (e.g. energy and water), have good design, be integrated with public transport and key services. The SA objectives should also address safety and crime.

6. Economy

A number of indicators of the economy and industry in Pembrokeshire are given in this section which relate to the **whole of the County** including the areas in the National Park.

Economic Activity

Table 32: Economic activity statistics for Pembrokeshire, 2005

| 2005 | Pembrokeshire (numbers) | Pembrokeshire (% of population aged 16-64) | Wales (% of population aged 16-64) | |
|---------------------|-------------------------|--|--|--|
| All people | | | | |
| Economically active | 51,400 | 76.8 | 75.2 | |
| In employment | 48,100 | 71.9 | 71.2 | |
| Employees | 38,700 | 57.8 | 62.1 | |
| Self employed | 9,100 | 13.6 | 8.5 | |
| Unemployed | 3,300 | 6.5 | 5.3 | |
| Males | | | | |
| Economically active | 27,800 | 80.8 | 79.0 | |
| In employment | 26,000 | 75.7 | 74.1 | |
| Employees | 18,900 | 55.0 | 61.0 | |
| Self employed | 7,000 | 20.3 | 12.6 | |
| Unemployed | 1,800 | 6.4 | 6.1 | |
| Females | | | | |
| Economically active | 23,700 | 72.7 | 71.2 | |
| In employment | 22,100 | 67.9 | 68.2 | |
| Employees | 19,800 | 60.8 | 63.2 | |
| Self employed | 2,100 | 6.6 | 4.3 | |
| Unemployed | 1,600 | 6.6 | 4.3 | |

Source:

Official Labour Market Statistics - www.nomisweb.co.uk based on ONS annual population surveys data. Economically active tables Table 33

| Jan 2017- Dec 2017 | Pembrokeshire (numbers) | Pembrokeshire (% of population aged 16-64) | Wales (% of population aged 16-64) |
|--------------------|-------------------------|--|--|
| | | agea to 0+) | agea to o+) |
| All people | | | |

| Economically active† | 57,600 | 75.8 | 76.0 |
|----------------------|--------|------|------|
| In employment† | 55,000 | 72.6 | 72.4 |
| Employees† | 42,100 | 56.9 | 62.3 |
| Self employed† | 12,200 | 15.0 | 9.6 |
| Unemployed§ | 2,600 | 4.6 | 4.8 |
| Males | | | |
| Economically active† | 30,700 | 81.6 | 79.6 |
| In employment† | 29,500 | 78.6 | 75.8 |
| Employees† | 21,200 | 58.1 | 62.1 |
| Self employed† | 7,900 | 19.9 | 13.2 |
| Unemployed§ | 1,200 | 3.9 | 4.8 |
| Females | | | |
| Economically active† | 26,900 | 70.1 | 72.4 |
| In employment† | 25,500 | 66.6 | 68.9 |
| Employees† | 21,000 | 55.7 | 62.4 |
| Self employed† | 4,300 | 10.3 | 6.1 |
| Unemployed§ | 1,400 | 5.1 | 4.8 |

Source: ONS annual population survey
† - numbers are for those aged 16 and over, % are for those aged 16-64

§ - numbers and % are for those aged 16 and over. % is a proportion of economically active

Source: Nomis https://www.nomisweb.co.uk/reports/lmp/la/1946157391/printable.aspx

Employee jobs

The following table provides details of employee jobs in Pembrokeshire by sector, with a comparison to the Welsh average in 2006. Employee jobs do not include self-employed workers, government-sponsored trainees or members of the Armed Forces.

Table 34 – Employee jobs 2006

| 2006 | Pembrokeshire (numbers) | Pembrokeshire (% of population aged 16-64) | Wales (% of population aged 16-64) |
|--|----------------------------|--|--|
| Total employee jobs | 39,900 | - | - |
| Full-time | 24,300 | 60.9 | 68.9 |
| Part-time | 15,600 | 39.1 | 31.1 |
| Employee jobs by industry | | | |
| Manufacturing | 3,000 | 7.4 | 10.9 |
| Construction | 3,100 | 7.7 | 4.8 |
| Services | 33,400 | 83.6 | 82.9 |
| Distribution, hotels & restaurants | 12,600 | 31.4 | 23.5 |
| Transport & communications | 2,200 | 5.5 | 5.9 |
| Finance, IT, other business activities | 3,600 | 9.0 | 21.2 |
| Public admin, education& health | 12,700 | 31.7 | 26.9 |
| Other services | 2,400 | 5.9 | 5.4 |
| Tourism-related [†] | 5,900 | 14.8 | 8.3 |

Data unavailable

Tourism consists of industries that are also part of the services industry

Notes:

% is a proportion of total employee jobs Employee jobs excludes self-employed, government-supported trainees and HM

Forces

Source: ONS annual business inquiry employee analysis

Data for 2016 are provided below, however, the categories have changed since 2006, and are therefore not directly comparable.

Table 35 – Employee jobs 2016

| 2016 | Pembrokeshire (employee jobs) | Pembrokeshire (%) | Wales (%) |
|---|-------------------------------|----------------------|--------------|
| Total employee jobs | 44,000 | - | - |
| Full-time | 26,000 | 59.1 | 65.2 |
| Part-time Part-time | 18,000 | 40.9 | 34.8 |
| Employee jobs by industry | | | |
| B : Mining and quarrying | 400 | 0.9 | 0.2 |
| C : Manufacturing | 2,250 | 5.1 | 11.4 |
| D : Electricity, gas, steam and air conditioning supply | 175 | 0.4 | 0.6 |
| E: Water supply; sewerage, waste management and remediation activities | 300 | 0.7 | 0.9 |
| F: Construction | 3,000 | 6.8 | 5.5 |
| G: Wholesale and retail trade; repair of motor vehicles and motorcycles | 7,000 | 15.9 | 15.1 |
| H : Transportation and storage | 1,750 | 4.0 | 2.9 |
| I : Accommodation and food service activities | 8,000 | 18.2 | 8.9 |
| J: Information and communication | 450 | 1.0 | 2.3 |
| K : Financial and insurance activities | 400 | 0.9 | 2.3 |
| L : Real estate activities | 800 | 1.8 | 1.6 |
| M : Professional, scientific and technical activities | 1,500 | 3.4 | 4.2 |
| N : Administrative and support service activities | 1,500 | 3.4 | 6.6 |
| O: Public administration and defence; compulsory social security | 2,000 | 4.5 | 6.8 |
| P: Education | 5,000 | 11.4 | 10.1 |
| Q : Human health and social work activities | 7,000 | 15.9 | 16.1 |
| R : Arts, entertainment and recreation | 2,000 | 4.5 | 2.5 |
| S : Other service activities | 600 | 1.4 | 1.5 |

Source: ONS Business Register and Employment Survey : open access

Notes: % is a proportion of total employee jobs excluding farm-based agriculture Employee jobs excludes self-employed, government-supported trainees and HM Forces Data excludes farm-based agriculture

Source: Nomis https://www.nomisweb.co.uk/reports/lmp/la/1946157391/printable.aspx

⁻ Data unavailable

Table 36: Number of people working from home

| | | 2001 | | 2011 | | | |
|-------------------------------|---------------|------|-------|--------|-------|-------|--|
| | Pembrokeshire | | Wales | Pembs | Pembs | Wales | |
| | Number | % | % | Number | % | % | |
| All people [†] | 44,897 | - | - | 52,951 | - | - | |
| Works mainly at or from home# | 7,377 | 16.4 | 9.7 | 5,260 | 9.7 | 5.36 | |

[†]All people aged 16 to 74, who were usually resident in the area at the time of the 2001 Census, and were in employment.

The percentage of people who work mainly at or from home (16.4%) is higher than the proportion in Wales (9.7%) in 2001. This figure dropped in 2011 but is still higher than the proportion in Wales.

Source: Census, ONS, Distance travelled to work (UV35), 2001 & 2011

Unemployment & economic inactivity

Table 37: Claimant count by age - not seasonally adjusted (May 2018)

| Age | Pembrokeshire | Pembrokeshire | Wales (%) |
|---------------|---------------|---------------|-----------|
| | (level) | (%) | |
| Aged 16+ | 1,445 | 2.0 | 2.3 |
| Aged 16 To 17 | 5 | 0.2 | 0.1 |
| Aged 18 To 24 | 370 | 4.1 | 3.4 |
| Aged 18 To 21 | 235 | 4.7 | 3.7 |
| Aged 25 To 49 | 680 | 2.0 | 2.4 |

Source: ONS Claimant count by sex and age

Note: % is number of claimants as a proportion of resident population of the same age

Source: https://www.nomisweb.co.uk/reports/lmp/la/1946157391/report.aspx?town=pembrokeshire

[#] All people aged 16 to 74, who were usually resident in the area at the time of the 2001 Census, and worked mainly at or from home.

Table 38: Working-age client group - main benefit claimants - not seasonally adjusted (November 2016)

| Statistical Group | Pembrokeshire | Pembrokeshire | Wales (%) |
|-----------------------------|---------------|---------------|-----------|
| | (Numbers) | (%) | |
| Total Claimants | 9,680 | 13.5 | 14.4 |
| Job Seekers | 1,170 | 1.6 | 1.4 |
| ESA And Incapacity Benefits | 5,380 | 7.5 | 8.4 |
| Lone Parents | 820 | 1.1 | 1.2 |
| Carers | 1,670 | 2.3 | 2.2 |
| Others On Income Related | 160 | 0.2 | 0.2 |
| Benefits | | | |
| Disabled | 310 | 0.4 | 0.7 |
| Bereaved | 160 | 0.2 | 0.2 |
| Main Out-Of-Work Benefits† | 7,530 | 10.5 | 11.3 |

Source: DWP benefit claimants - working age client group

† Main out-of-work benefits includes the groups: job seekers, ESA and incapacity benefits, lone parents and others on income related benefits. See the **Definitions and Explanations** below for details

Notes: % is a proportion of resident population of area aged 16-64 Figures in this table do not yet include claimants of Universal Credit

Source: Data extrapolated from Nomis:

https://www.nomisweb.co.uk/reports/lmp/la/1946157391/report.aspx?town=pembrokeshire

Seasonal unemployment still the case.

Economically inactive

Table 39: Economic inactivity rate (excluding students) StatsWales

| abio dei Edditettio illadittity tato (exeluanily diadetti | | | | , Clais i also | | | | | | | | | | |
|---|--------|--------|--------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | Year | Year | Year | Year | Year | Year | Year | Year | Year | Year | Year | Year | Year | Year |
| | ending | ending | ending | ending | ending | ending | ending | ending | ending | ending | ending | ending | ending | ending |
| | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 |
| | Mar | Mar | Mar | Mar | Mar | Mar | Mar | Mar | Mar | Mar | Mar | Mar | Mar | Mar |
| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| United Kingdom | 21.0 | 20.8 | 20.5 | 20.4 | 20.1 | 20.2 | 20.3 | 19.9 | 19.3 | 18.8 | 18.6 | 18.5 | 18.3 | 17.8 |
| Wales | 24.7 | 24.4 | 24.0 | 23.7 | 23.4 | 24.1 | 23.6 | 22.9 | 21.7 | 20.7 | 21.3 | 20.8 | 20.7 | 19.8 |
| Pembrokeshire | 26.2 | 25.1 | 24.9 | 24.8 | 23.2 | 24.0 | 25.1 | 23.8 | 22.9 | 21.0 | 19.9 | 21.8 | 21.2 | 22.4 |

Source: StatsWales https://statswales.gov.wales/Catalogue/Business-Economy-and-Labour-Market/People-and-Work/Economic-Inactivity/economicinactivityratesexcludingstudents-by-welshlocalarea-year

Employment Land availability

Land identified for employment purposes (permitted, allocated or built) in 2013 was 1137.37Ha, outside the National Park. By 2016 it increased to 1195.34Ha. In 2016, 976.5Ha was actively in use as employment land. A total of 192.5Ha was recorded as being vacant (including buildings) in 2013, and this was recorded as 217.82Ha in 2016. There is an 18% vacancy level however its geographical distribution varies considerably. There are significant changes in use of land on existing sites on a year by year basis, as parts of them cease to be used or come back into use. Overall provision of general industrial sites and take up is good in general, but there may need to be adjustments to allocations in some locations in conjunction with preparation of LDP2. Provision of serviced units remains a challenge, as funding to build new units is hard to secure and without this, development may be unviable (**Source:** PCC LDP Review background documents, 2018).

Income

Table 40: Average gross weekly pay (full time workers) in Pembrokeshire and Wales by residence, 2006 – 2016

| Year | Gross weekly pay | | | | |
|------|------------------|---------|--|--|--|
| | Pembrokeshire | Wales | | | |
| 2006 | £367.50 | £404.20 | | | |
| 2007 | £364.20 | £414.80 | | | |
| 2008 | £415.30 | £424.80 | | | |
| 2009 | £427.60 | £444.60 | | | |
| 2010 | £463.20 | £456.20 | | | |
| 2011 | £463.70 | £455.10 | | | |
| 2012 | £419.90 | £454.90 | | | |
| 2013 | £478.83 | £475.30 | | | |
| 2014 | £432.50 | £479.40 | | | |
| 2015 | £430.00 | £473.40 | | | |
| 2016 | £459.00 | £498.30 | | | |

Sources:

Official Labour Market Statistics, Nomis www.nomisweb.co.uk

Labour Demand

'Jobs density' is a ratio of total jobs available to population aged 16-64. Total jobs <u>includes</u> employees, self-employed workers, government-sponsored trainees and members of HM Armed Forces.

Table 41: Jobs density in Pembrokeshire, Wales and G.B.

| | Pembrokeshire (density) | Wales (density) | Great Britain (density) |
|------|-------------------------|--------------------|-------------------------|
| 2001 | 0.71 | 0.70 | 0.80 |
| 2005 | 0.74 | 0.73 | 0.80 |
| 2006 | 0.72 | 0.72 | 0.79 |
| 2007 | 0.72 | 0.71 | 0.79 |
| 2008 | 0.68 | 0.70 | 0.79 |
| 2009 | 0.73 | 0.70 | 0.77 |
| 2010 | 0.72 | 0.69 | 0.77 |
| 2011 | 0.75 | 0.70 | 0.78 |
| 2012 | 0.77 | 0.71 | 0.78 |
| 2013 | 0.77 | 0.72 | 0.79 |
| 2014 | 0.76 | 0.73 | 0.81 |
| 2015 | 0.76 | 0.75 | 0.83 |
| 2016 | 0.77 | 0.76 | 0.84 |

Source:

Official Labour Market Statistics, based on ONS Census and population survey data <a href="https://www.nomisweb.co.uk/reports/lmp/la/1946157391/subreports/jd_time_series/printable.aspx?&allInGB=&pivot=1&sort=&ascending="https://www.nomisweb.co.uk/reports/lmp/la/1946157391/subreports/jd_time_series/printable.aspx?&allInGB=&pivot=1&sort=&ascending=

Stock of VAT Registered Businesses

Table 42: The number of VAT registered businesses in Pembrokeshire at the beginning of recent years and the annual net loss / gain of registrations

| | VAT Registered Business per Year* | | | | | | | |
|--------------------|-----------------------------------|------|-------|------|------|--|--|--|
| | 2004 2005 2006 2007 2008 | | | | | | | |
| | | | | | | | | |
| Stock at 1 January | 4975 | 4895 | 5135 | 5165 | 5305 | | | |
| Net loss / gain | N/A | -80 | + 240 | +30 | +140 | | | |

^{*}This dataset has not been updated since 2008. Data are now recorded as business births, deaths and survival rates.

https://www.ons.gov.uk/businessindustryandtrade/business/activitysizeandlocation/datasets/businessdemographyreferencetable

Active Business Enterprises (2010-2016)

Table 43

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------|--------|--------|--------|--------|--------|--------|--------|
| Pembrokeshire | 4,640 | 4,525 | 4,455 | 4,480 | 4,490 | 4,500 | 4,585 |
| Wales | 90,435 | 88,590 | 87,985 | 89,750 | 92,445 | 95,010 | 98,445 |

Active enterprises are defined as businesses that had either turnover or employment at any time during the reference period. Births and deaths are then identified by comparing active populations for different years.

Source: ONS

https://www.ons.gov.uk/businessindustryandtrade/business/activitysizeandlocation/datasets/businessdemographyreferencetable

Industrial Structure

Table 44: Size of enterprises by quantity and percentage in Pembrokeshire and Wales (2006)

| | Pembrokeshire 2006 | | Wales (2006) | |
|-----------------------------|--------------------|-------------|--------------|-------------|
| Size | Number of | % of total | Number of | % of total |
| | enterprises | enterprises | enterprises | enterprises |
| All Enterprises | 11,865 | 100 | 190,420 | 100.0 |
| Micro (0 – 9 employees) | 11,220 | 94.5 | 179,855 | 94.5 |
| Small (10 – 49 employees) | 390 | 3.3 | 7,065 | 3.7 |
| Medium (50 – 249 employees) | 80 | 0.7 | 1,890 | 1.0 |
| Large (250+ employees) | 175 | 1.5 | 1,615 | 0.8 |

UK Business Counts (2017)

Table 45

| Enterprises | Pembrokeshire (Numbers) | Pembrokeshire (%) | Wales (Numbers) | Wales (%) |
|--------------------|-------------------------|-------------------|--------------------|-----------|
| Micro (0 To 9) | 4,970 | 90.0 | 91,470 | 89.2 |
| Small (10 To 49) | 495 | 9.0 | 9,430 | 9.2 |
| Medium (50 To 249) | 55 | 1.0 | 1,375 | 1.3 |
| Large (250+) | 5 | 0.1 | 305 | 0.3 |
| Total | 5,525 | - | 102,585 | - |

| Local Units | | | | |
|--------------------|-------|------|---------|------|
| Micro (0 To 9) | 5,515 | 85.8 | 104,535 | 83.2 |
| Small (10 To 49) | 795 | 12.4 | 17,385 | 13.8 |
| Medium (50 To 249) | 110 | 1.7 | 3,270 | 2.6 |
| Large (250+) | 10 | 0.2 | 490 | 0.4 |
| Total | 6,430 | - | 125,675 | - |

Source: Inter Departmental Business Register (ONS) Note: % is as a proportion of total (enterprises or local units)

Source: https://www.nomisweb.co.uk/reports/lmp/la/1946157391/report.aspx?town=pembrokeshire

The data contained in the table are compiled from an extract taken from the Inter-Departmental Business Register (IDBR) recording the position of units as at March of the reference year. The IDBR contains information on VAT traders and PAYE employers in a statistical register which provides the basis for the Office for National Statistics to conduct surveys of businesses.

The table presents analysis of businesses at both Enterprise and Local Unit level. An Enterprise is the smallest combination of legal units (generally based on VAT and/or PAYE records) which has a certain degree of autonomy within an Enterprise Group. An individual site (for example a factory or shop) in an enterprise is called a local unit.

The employment information on the IDBR is drawn mainly from the Business Register Employment Survey (BRES). Because this is based on a sample of enterprises, estimates from previous returns and from other ONS surveys have also been used. For the smallest units, either PAYE jobs or employment imputed from VAT turnover is used. Estimates in the table are rounded to prevent disclosure.

Source:

http://www.statswales.wales.gov.uk/TableViewer/tableView.aspx?ReportId=1694

https://www.nomisweb.co.uk/reports/lmp/la/1946157391/report.aspx?town=pembrokeshire

Wealth Creation

Wealth creation is measured by Gross Value Added (GVA) per capita. GVA measures the contribution to the economy of each individual producer, industry or sector in the United Kingdom.

Table 46: Gross Value Added (GVA) in £ per head at current basic prices, 2002-2016

| Year | Pembrokeshire | South West | Wales |
|------|---------------|------------|------------|
| | | Wales | |
| 2002 | 11,891 | 11,278 | 12,793 |
| 2003 | 12,934 | 11,964 | 13,551 |
| 2004 | 13,573 | 12,686 | 14,201 |
| 2005 | 14,674 | 13,591 | 14,847 |
| 2006 | 15,205 | 14,283 | 15,648 |
| 2007 | 15,657 | 14,539 | 16,053 |
| 2008 | 14,384 | 14,278 | 15,784 |
| 2009 | 14,229 | 14,204 | 15,577 |
| 2010 | 14,745 | 14,601 | 15,797 |
| 2011 | 15,275 | 15,125 | 16,581 |
| 2012 | 15,423 | 15,349 | 16,957 |
| 2013 | 16,293 | 15,781 | 17,559 |
| 2014 | 15,842 | 16,380 | 17,837 |
| 2015 | 17,155 | 16,761 | 18,495 |
| 2016 | 17,635 (p) | 17,381 (p) | 19,140 (p) |

Source: StatsWales, 2017

https://statswales.gov.wales/Catalogue/Business-Economy-and-Labour-Market/Regional-Accounts/Gross-Value-Added-GDP/gva-by-measure-welsheconomicregion-year

South West Wales comprises Pembrokeshire, Carmarthenshire, Swansea and Neath Port Talbot.

(p) denotes provisional

Agriculture

The Business Register and Employment Survey excludes farm-based employment, which is estimated by the June Agricultural Survey (most recently in 2013). This estimates 2,279 active farms in Pembrokeshire, with 1,700 full time principal farmers and 2,086 part time principal farmers. Additional employment is given as 780 regular workers and 643 casual workers. The area farmed is approximately 140,000 ha, up from approximately 125,000 ha in 2002. 12% of this land is used for crops and horticulture. The remainder is grassland: permanent pasture (86,000 ha), rough grazing (8,000 ha), and rotational grassland (21,000 ha). The grassland supports 308,000 sheep and 175,000 cattle (of which approximately a fifth are specialist beef animals and the remainder are primarily for dairy production).

There are a further 400 jobs in non-farm-based agriculture17, including support activities, hunting and fishing, wholesale of agricultural machinery, equipment, and supplies, and retail of flowers, plants, seeds, fertiliser, etc. Particularly notable is the veterinary activities sector, which employs 200 people, or three times the national average proportion. Logging and manufacture of wood-based items generate a further 100 jobs, and there are 100 workers in quarrying; these are both high by national standards.

Source: Pembrokeshire Economic Profile (2015)

https://www.pembrokeshire.gov.uk/objview.asp?object_id=4096&language=

Tourism

Table 47: Volume and value of tourism in Pembrokeshire – Summary

| | CAMBRI DGE 2003 | STEAM 2003 | CAMBRIDGE 2004 | STEAM 2004 | STEAM 2014 | STEAM 2015 |
|---------------------------------|--------------------|---------------|-------------------|---------------|---------------|---------------|
| Visitor trips | | | | | | |
| Staying trips (M) | 1.153 | * | 1.209 | | | |
| Tourism/leisure day trips (M) | 2.1 | 2.025 | 2.173 | 1.875 | 1.947 | 1.983 |
| Total visitor nights (M) | 5.1 | 10.565 | 5.377 | 10.732 | 11.37 | 12.07 |
| Total visitor days (M) | 7.2 | 12.59 | 7.550 | 12.607 | 13.32 | 14.05 |
| Visitor spend | | | | | | |
| Direct visitor spend (£M) | 262 | * | 292.712 | | 403.65 | 434.69 |
| Indirect and induced spend (£M) | 81 | * | 70.091 | | | |
| Total visitor spend (£M) | 343 | 423 | 362.803 | 450.300 | | |
| Economic Impact (£M) | | | | | 543.37 | 585.13 |
| Employment | | | | | | |
| Direct employment (FTEs) | | | | | 9,933 | 10,176 |
| Total employment (FTEs) | 6,139 | * | 6,415 | 16,105 | 11,438 | 11,834 |

2005 – STEAM Model (Scarborough Tourism Economic Activity Monitor)

2004-2015 STEAM Final Trend Report

Summary (2015)

Total tourism trips (staying and day visitors) – 13,320,000

Total tourism spending - £434,690,000

FTE jobs supported by tourism – 10,176 (Direct); 11,834 (Total)

Sources: STEAM Final Trend Report 2004-2015 http://www.tourismhelp.co.uk/objview.asp?object_id=721
Pembrokeshire Destination Management Plan 2013-2018 http://www.tourismhelp.co.uk/objview.asp?object_id=721

Swansea Bay City Region

Pembrokeshire signed up to the Swansea bay City Region in March 2017. The City Deal is expected to give the Swansea Bay City Region a permanent uplift in its GVA of £1.8 billion and will generate almost 10,000 new jobs over the next 15 years. The total investment package is made up of £241 million UK and Welsh Government funding, £396 million other Public Sector investment and £637 million from the Private Sector.

The City Deal programme encompasses 11 projects across 4 key themes of Economic Acceleration, Life Science and Well-being, Energy, and Smart Manufacturing. An enhanced Digital Infrastructure and next generation wireless networks and the development of workforce skills and talent will underpin each.

Source: Swansea Bay City Deal Website http://www.swanseabaycitydeal.wales/about/

Pembrokeshire is involved in three key schemes as part of the City Deal. Led by the Port of Milford Haven, Pembroke Dock Marine is a £76million project to establish a marine energy centre around the Milford Haven waterway. This will be a centre for marine energy development, fabrication, testing and deployment in the town's former naval dockyard. The other two schemes, which will be rolled out across the whole region, involve improving broadband and mobile communications; and creating a new industry based around innovative and sustainable energy generation in houses.

Source: PCC Annual Improvement Review 2017 https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language=

Recreation Facilities

Pembrokeshire County Council operate a variety of leisure facilities including multi-activity leisure facilities, sports halls, artificial turf pitches, tennis courts, squash courts, and a climbing wall. In addition there are other school and community based indoor and outdoor facilities available.

Table 48: Visitors using Leisure Centres

| Year | Number |
|----------------------------|-----------|
| 2004/05 | 984,000 |
| 2005/06 | 1,195,000 |
| 2006/07 | 1,318,000 |
| 2007/08 (Projected number) | 1,357,000 |

Source: Health Care and Well-being Strategy 2008-2011 – Needs Assessment Report 2007, Corporate Improvement Plans (2006-2008)

Table 49:

| The number of visits to local authority sport and leisure centres during the year where the visitor will be participating in physical activity, per 1,000 population | | | | | | |
|--|---------------|-------|--|--|--|--|
| | | | | | | |
| Year | Pembrokeshire | Wales | | | | |
| 2015/2016 9,804 8,409 | | | | | | |
| 2015/2016 | 9,804 | 8,409 | | | | |

Source: PCC Annual Improvement Review 2017 https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language=

Rights of Way

The Rights of Way Improvement Plan 2018-2028 is being consulted upon in 2018. Current Rights of Way Network characteristics: Table 50:

| 1 011010 0 01 | | | |
|---------------------|----------------------|----------------------|-------------|
| Types of route | Pembrokeshire (all | PRoW in the National | PRoW in PCC |
| | routes) | Park | plan area |
| Footpaths | 1832.7 km | 583.7 km | 1249 km |
| | 77.9% of the network | | |
| Bridleways | 497.6 km | 177.9 km | 319.7 km |
| | 21.2% of the network | | |
| Restricted Byways | 2.6 km | 1.1 km | 1.5 km |
| (formerly known as | 0.1% of the network | | |
| Roads Used As | | | |
| Public Paths) | | | |
| Byways Open To | 18.8 km | 7.2 km | 11.6 km |
| All Traffic (BOATs) | 0.8% of the network | | |

Source: Rights of Way Improvement Plan for Pembrokeshire (ROWIP) Consultation Draft 2018-2028

Table 51

| | Length of right of way and permissive path (m) | % of paths surveyed |
|----------------|--|---------------------|
| Open | 878,106 | 83.5% |
| Closed | 172,533 | 16.5% |
| Total surveyed | 1050,639 | (100%) |

Source: Rights of Way Improvement Plan for Pembrokeshire (ROWIP) 2007-2017

Communications and Utilities

Water & Sewerage

Waste water – Dwr Cymru Welsh Water has numerous Waste Water Treatment Works within the County which are designed to treat foul effluent from residential and commercial/industrial premises. The discharges from each of the Works are licensed by the Natural Resources Wales to meet European Directives. Dependant on the scale of development identified within the Local Development Plan the associated sewerage catchments (sewer network & WWTW) may need to be upgraded as required to accommodate future growth (Dwr Cymru Welsh Water).

Broadband, Digital Television and Radio Coverage

The area's ICT links are a key factor in its competitiveness and have the potential to reduce the need to travel. Although nearly all exchanges are now enabled for broadband, there are significant constraints on geographical coverage, capacity and cost. It is crucial to develop bandwidth and coverage, and to encourage competition between suppliers, so that the area has access to competitively priced, high specification broadband. Wireless broadband opportunities need to be exploited as part of this. More work is needed to increase take-up of ICT applications by local business and by the public more generally. A programme of action on ICT will be developed (WSP Pembrokeshire Haven,

http://new.wales.gov.uk/about/strategy/spatial/pembrokeshire/Pembsinterim/accessibility/?lang=en). Superfast Broadband is a priority for Welsh Government

Pembrokeshire's economy is currently relatively self-contained; that is most people who live in Pembrokeshire work in Pembrokeshire. Whilst increases in home-working (and therefore the potential for people's work base to be some distance from Pembrokeshire) are discernible in the 2001 and 2011 Census, the increase is from a very low base.

A continued rise in use of data and reliance on IT systems will shape how work is undertaken is anticipated. To date, innovations in information communication technology have been easier and more cost effective to introduce in urban areas than in rural areas. Nonetheless, significant investment in broadband is planned and this may lead to an increase in home working. This will enable Pembrokeshire to market its high quality of life as a factor in attracting new residents. Homeworking, which is likely to be more of a feature of public sector employment, will affect the social dynamic that work provides.

Digital radio is transmitted via the Preseli mast and should provide DAB radio to the majority of the County. Similarly, digital television is available throughout the County.

Mobile Communications

Groupe Speciale Mobile Association (GSMA) represents the interests of mobile operators worldwide, providing a platform for over 700 networks including all the UK's leading providers (Three, EE, O2 and Vodafone). Pembrokeshire lags behind much of the UK in terms of 4G coverage, which enables greater Internet use and video messaging. On average customers in Wales can get a 4G just 35.4% of the time. In Pembrokeshire there is varying coverage:



Sources:

Mobile network coverage, Which? https://www.which.co.uk/reviews/mobile-phone-providers/article/mobile-phone-coverage-map Mobile coverage Wales https://www.which.co.uk/reviews/mobile-phone-providers/article/mobile-phone-coverage-across-the-uk/mobile-phone-coverage-in-wales

Economy Issues

- Increase in economically active.
- Seasonal jobs

- Low pay compared to Wales
- Large proportion of small businesses.
- Low GVA
- Tourism economy.
- Broadband coverage
- Mobile coverage.

The LDP should seek to develop economic opportunities while balancing the needs of the environment and social implications working towards sustainable development. Employment land will be subject to site specific SA later in the process. In addition to allocating land the Plan can have policies enabling home based working, farm diversification, encouraging tourism and retail for example. The Plan should ensure compliance with EU legislation and promote wider public consultation, participation and access to environmental information.

SA objectives should seek to guide improvement of employment opportunities which in turn will impact many aspects including unemployment, job satisfaction, improved wages, and quality of life. This will also support the regeneration of the towns and local centres. Good quality employment will encourage younger people to stay in the area or return to the County, which will also help to balance the demographic profile.

A sustainable and diverse local economy entails good quality tourism and leisure development which links tourism to culture, heritage, retail, agriculture and the environment. The energy industry plays an important role in the economy and the promotion of renewable and low carbon energy production can complement this. The development of good quality infrastructure and broadband services is also an integral aspect to support a sustainable and diverse local economy.

Baseline data (Part 2)

7. Climatic factors

Table 52: Temperature and rainfall data

| | Max temperature (°C) | | | Min temperature (°C) | | | Rainfall (mm) | | |
|------------------|----------------------|----------------|---------------|-------------------------|---------------|---------------|---------------|---------------|----------------|
| | 1961- 1990 | 1971 - 2000 | 1981- 2010 | 1961- 1990 | 1971- 2000 | 1981- 2010 | 1961- 1990 | 1971- 2000 | 1981 - 2010 |
| Tenby (Jan) | 8.1 | 8.5 | 8.7 | 2.9 | 3.1 | 3.2 | 110.2 | 115.4 | 113.5 |
| Tenby (July) | 19.1 | 19.5 | 19.6 | 11.7 | 12 | 12.3 | 53.9 | 52.7 | 68.8 |
| Aberporth (Jan) | 7 | 7.3 | 7.6 | 2.7 | 2.9 | 3.1 | 85.7 | 88.5 | 83.7 |
| Aberporth (July) | 17.6 | 18 | 18.2 | 11.9 | 12.2 | 12.3 | 51 | 49.5 | 61.4 |

Source: The Meteorological Office, 2018 https://www.metoffice.gov.uk/climate/uk/data

Carbon dioxide emissions

Table 53: Local Authority CO2 emissions estimates 2005-2016 (kt CO2)

| | Industry | | | | | Population | Per |
|------|------------|----------|-----------|------------------|---------|------------|-----------|
| | and | | | LULUCF | | ('000s, | Capita |
| | Commercial | Domestic | Transport | Net | Grand | mid-year | Emissions |
| Year | Total | Total | Total | Emissions | Total | estimate) | (t) |
| 2005 | 617.0 | 351.7 | 232.6 | 27.5 | 1,228.8 | 117.2 | 10.5 |
| 2006 | 618.5 | 358.8 | 238.4 | 20.7 | 1,236.3 | 118.3 | 10.5 |
| 2007 | 623.3 | 336.0 | 238.4 | 12.8 | 1,210.5 | 119.6 | 10.1 |
| 2008 | 606.7 | 348.4 | 232.7 | 10.6 | 1,198.4 | 121.1 | 9.9 |
| 2009 | 641.7 | 322.4 | 227.2 | 1.3 | 1,192.6 | 121.6 | 9.8 |
| 2010 | 612.0 | 349.5 | 225.2 | -4.6 | 1,182.1 | 122.0 | 9.7 |
| 2011 | 600.8 | 297.2 | 219.2 | -9.2 | 1,108.1 | 122.6 | 9.0 |
| 2012 | 578.0 | 313.1 | 214.6 | -10.8 | 1,094.9 | 123.1 | 8.9 |

| 2013 | 560.0 | 304.3 | 217.2 | -15.2 | 1,066.2 | 123.4 | 8.6 |
|------|-------|-------|-------|-------|---------|-------|-----|
| 2014 | 486.7 | 262.2 | 221.8 | -21.5 | 949.1 | 123.8 | 7.7 |
| 2015 | 443.8 | 251.8 | 224.7 | -27.4 | 892.9 | 123.7 | 7.2 |
| 2016 | 375.9 | 237.1 | 230.2 | -29.1 | 814.1 | 124.2 | 6.6 |

LULUCF - Land use, Land use change & forestry

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/720677/2005-16_UK_local_and_regional_CO2_emissions.xlsx

Sources: https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-2016

Targets

The UK is bound to meeting specific emission targets as part of the Kyoto Agreement, which is to reduce emissions 8% below the 1990 baseline levels. By 2050, the target is to have cut carbon emissions by 60%, with 25% cut by 2020. The UK government is actively promoting Carbon Capture and Storage schemes, which could reduce emissions from fossil fuel power stations by as much as 90%.

The Environment (Wales) Act places a duty on the Welsh Ministers to ensure that in 2050 net emissions are at least 80% lower than the baseline set in legislation. This will be achieved through the setting of interim targets for 2020, 2030 and 2040 and 5 yearly carbon budgets up until to 2050.

There is a duty on Welsh Ministers to prepare and publish a set of policies and proposals for the budgetary period. Welsh Ministers are also required to publish a statement of progress after each budgetary period. The UK Committee on Climate Change (UKCCC) will provide advice on the latest scientific evidence and report progress made against budget targets. The Welsh Government will be responding to the advice on the Targets and Budgets in the summer of 2018.

Issues, constraints and gaps

Reliance on cars for transport

Efficiency of homes

LNG and Pembroke Power Station may contribute to an increase in CO₂ in the County.

Public buildings carbon reduction 7.46% by April 2007 – CHECK this PCC duty to reduce the amount of CO2 that is emitted by 3% each year

Sources:

http://www.pembrokeshire.gov.uk/content.asp?Parent Directory id=104&nav=993,1005

PCC Annual Improvement Review 2017 <a href="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=1624&language="https://www.pembrokeshire.gov.uk/objview.asp.gov.uk/objvie

Resource efficiency - with CO₂

The figure below is an indicator of resource efficiency. It shows, at current prices, the ratio of CO₂ emissions (tonnes) to Gross Value Added (GVA) (£ million), 2005-2012. These data are no longer updated.

Table 54: Resource efficiency - The ratio of carbon dioxide emissions to GVA at current prices

| | | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-------|---------------------------|------|------|------|------|------|------|------|------|
| Wales | | 778 | 749 | 709 | 685 | 597 | 647 | 559 | 533 |
| Wales | Swansea | 486 | 474 | 441 | 435 | 379 | 396 | 340 | 363 |
| | South West Wales | 775 | 741 | 688 | 720 | 662 | 663 | 583 | 566 |
| | Powys | 504 | 527 | 455 | 479 | 466 | 489 | 393 | 413 |
| | Monmouthshire and Newport | 690 | 642 | 625 | 592 | 514 | 560 | 495 | 473 |
| | Isle of Anglesey | 1127 | 1107 | 1044 | 959 | 849 | 743 | 636 | 640 |
| | Gwynedd | 483 | 468 | 447 | 425 | 390 | 431 | 353 | 367 |
| | Gwent Valleys | 662 | 603 | 575 | 559 | 502 | 489 | 428 | 446 |
| | Flintshire and Wrexham | 813 | 827 | 791 | 780 | 656 | 644 | 542 | 581 |
| | Conwy and | 564 | 570 | 522 | 486 | 455 | 467 | 405 | 419 |

| Denbighshire | | | | | | | | |
|-----------------------------------|------|------|------|------|------|------|------|------|
| Central Valleys | 611 | 584 | 548 | 517 | 450 | 435 | 405 | 417 |
| Cardiff and Vale of Glamorgan | 482 | 430 | 384 | 376 | 350 | 361 | 310 | 324 |
| Bridgend and Neath Port Talbot | 2553 | 2486 | 2406 | 2192 | 1816 | 2248 | 1939 | 1566 |

^{*}South West Wales = Pembrokeshire, Ceredigion & Carmarthenshire CCs.

Source: StatsWales https://statswales.gov.wales/Catalogue/Sustainable-Development/Sust

Climate change scenarios

The UK climate is changing as a result human influences through emissions of greenhouse gases such as carbon dioxide and methane. Possible climate change scenarios have been developed by the Defra funded UK Climate Impacts Programme (UKCIP). In general terms, the UK climate will become warmer, sea levels will rise. The temperature of coastal waters will also increase, although not as rapidly as over land. High summer temperatures will become more frequent, whilst very cold winters will become increasingly rare. There will be wetter winters, drier summers, decrease in snowfall and heavy winter precipitation will become more frequent. This means increased flow into estuaries, and also increased storminess of coasts. Relative sea level will continue to rise around most of the UK's shoreline, and there will be a higher risk of flooding of low lying areas. Extreme sea levels will be experienced more frequently.

Modelled sea level rises for the South West and Wales as 3.5mm per year in 1990-2025 (Defra). Technical Advice Note 15 suggests projections for sea level rises around the Welsh coast of between 25 to 30cm by 2050, slightly more in the south than the north.

Table 55

| Region | Assumed vertical land movement (mm/yr) | Net sea-lev | Net sea-level rise (mm/yr) | | | | |
|--------|--|-------------------|----------------------------|--|--|--------------------|--|
| | | 1990- 2025 | | | | | |
| Wales | -0.5 | 3.5 8.0 11.5 14.5 | | | | 5mm/yr constant | |

Table 56: Peak river flow allowances by river basin district*

| | | diretiret | |
|----------------------------------|--------------------|--------------------|--------------------|
| | Total potential | Total potential | Total potential |
| | change anticipated | change anticipated | change anticipated |
| | by the 2020s | by the 2050s | by the 2080s |
| West Wales | | | |
| Upper end estimate | 25% | 40% | 75% |
| Change factor / central estimate | 15% | 25% | 30% |
| Lower end estimate | 5% | 10% | 15% |

^{*}Source: UK Climate Projections 2009, published June 2009 by the UK Government Department for Environment, Food and Rural Affairs.

Estimates of peak flow increases in rivers are provided to represent future risk.

Sea level rise allowances

Projections of relative mean sea level rise for each epoch (period of time) is provided for the Welsh coastline in Table 2. These projections are consistent with the latest global predictions for sea level rise. The rate of change is projected to increase in each epoch.

Table 57: sea level allowance for each epoch in millimetres (mm) per year and cumulative sea level rise for each epoch (using sea levels published in 2008 as the baseline)*

| Period | 2009- 2025 | 2026- 2055 | 2056- 2085 | 2086- 2116 | Cumulative rise to 2116 |
|-----------------------|---------------|---------------|---------------|---------------|-------------------------|
| Annual change (mm/yr) | 3.5 | 8.0 | 11.5 | 14.5 | |
| Total increase | 59.5 mm | 240mm | 345mm | 449.5mm | 1094mm |

^{*} Source: adapted from FCDPAG3 Economic Appraisal. Supplementary note to Operating authorities – Climate Change Impacts (Oct 2006) (figures calculated & published in 2008 - applicable for use from 1 Jan 2009).

Source: WG https://gov.wales/docs/desh/publications/160831guidance-for-flood-consequence-assessments-climate-change-allowances-en.pdf

Adapting to Climate Change, UK Climate Projections 2009 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69257/pb13274-uk-climate-projections-090617.pdf

Trend

Increase in temperature Frequency of storm events.

Climate Issues/constraints/gaps

Impacts of climate change on agriculture, infrastructure (sewers), flooding, erosion, storm damage and subsidence, drought in summer, low flows in rivers, thermal discomfort in buildings, increased health risks in summer, but reduced cold weather illness, effects on biodiversity and habitats.

The LDP should seek to support commitments to reduce greenhouse gas emissions, and encourage more sustainable forms of transport, heating, and encourage general energy efficiency, to ensure that new development responds and adapts to climate change.

Planning can help to mitigate Pembrokeshire's contributions to climate change through measures such as energy efficient building design, efficient transport infrastructure and appropriate management of biodegradable waste. Planning can also help the County

adapt to the impacts of climate change through prevention of inappropriate development in flood risk areas and managing surface water run-off. Climate change will also have impacts on shoreline management planning and climate change preparedness. There may be impacts on key transport routes throughout the County from sea-level rise and flooding events.

The SA objective can incorporate:

- · Reducing greenhouse gas emissions
- Supporting energy conservation and energy efficient design
- Promoting renewable energy generation and cleaner technologies
- Efficient land use patterns to minimise travel
- Sustainable transport methods
- New developments have regard to risk, causes and consequences of flooding
- Promote sustainable drainage systems
- Reduce vulnerability of the built environment to the effects of climate change.

Sources:

UKCIP http://www.ukcip.org.uk

WG Flood Consequences Assessments: Climate Change Allowances https://gov.wales/docs/desh/publications/160831guidance-for-flood-consequence-assessments-climate-change-allowances-en.pdf

8. Air quality

Summary of baseline

Pembrokeshire has two designated Air Quality Management Areas (AQMA) for Nitrogen Dioxide (NO₂). AQMA area No.1 covers Picton Place to Albert Street in Haverfordwest, whilst area No.2 covers the entrance to Pembroke Castle on Westgate Hill to properties 49 and 54 on Main Street Pembroke. There are also other pollutants which are sampled in the County include benzene, nitrogen oxides (NO_x), sulphur dioxide (SO₂), particulate matter (PM₁₀) and ozone.

Other pollutants are also measured at a national scale:

Lead, volatile organic compounds, sulphur dioxide, nitrogen oxides, carbon monoxide, benzene, 1,3-butadiene, fine particles*. Fine particles can be both primary and secondary pollutants. These pollutants can reduce local air quality - affecting human health and vegetation growth, and causing damage to materials.

Sulphur dioxide, nitrogen oxides, hydrochloric acid contribute to acid deposition which leads to degradation of the terrestrial environment.

Ozone is primarily formed by a complicated series of chemical reactions initiated by sunlight. These reactions can be summarised as the sunlight-initiated oxidation of volatile organic compounds (VOCs) in the presence of nitrogen oxides (NO_x). Traffic exhausts, power plants and factories are the main sources of VOCs and NO_x.

Benzene is a VOC which is a minor constituent of petrol. The main sources of benzene in the atmosphere in Europe are the distribution and combustion of petrol. Of these, combustion by petrol vehicles is the single biggest source (70% of total emissions).

Benzene

There have been no exceedances for benzene in Haverfordwest or Pembroke for many years. As a result monitoring has ceased, and no further monitoring is proposed for future years.

Table 58: Annual mean benzene concentrations 2002-2006

| Location | Annual mean benzene concer | ntrations 2002-2006 μg/m³ (Nur | nber of months monitoring ir | brackets) | | | | | | |
|---|----------------------------|--------------------------------|------------------------------|-----------|--|--|--|--|--|--|
| | 2002-2006 average | 2007-2011 average | 2012-2015 average | 2015 | | | | | | |
| Dark St., H'west | 1.89 | 1.03 | 0.83 | 0.4 | | | | | | |
| Main St., Pembroke | 2.51 | 1.28 | 0.8 | 0.8 | | | | | | |
| UK Air Quality Strategy objective (200) for benzene = 16.25 µg/m³ running annual mean and 5µg/m³ annual average | | | | | | | | | | |

Source: PCC Air Quality Review 2007, 2008, 2010, 2013, 2014, 2016, 2017

Nitrogen dioxide (NO₂)

Bias adjusted figures indicate the Air Quality Strategy objectives were exceeded at High Street, Dark Street and Albert Street in Haverfordwest between 2007 and 2013.

Table 59: Bias adjusted annual mean nitrogen dioxide levels 2007-2013

| | Bias A adjusted annual mean NO₂ level μg/m₃ (Bias A x Mean) | | | | | | | | | | | | |
|-------------------------------------|---|----------------|-----------------|---------------|---------------|----------------|--|--|--|--|--|--|--|
| Location | 2007 | 2008 | 2009 | 2011 | 2012 | 2013 | | | | | | | |
| | Bias A = 0.759 | Bias A = 0.870 | Bias A = 0.870* | Bias A = 0.83 | Bias A = 0.79 | Bias A = 0.80* | | | | | | | |
| High St Haverfordwest | | 28.1 | 39 | 0.2 * | 36.2 | 40.2 * | | | | | | | |
| Dark St Haverfordwest | 34.8 | 41 | 31 | 24.7 | 23.5 | 25.1 | | | | | | | |
| Dark St 2 Haverfordwest | | 46 | 23.3 | 18.7 | 18.4 | 18.5 | | | | | | | |
| Merlins Bridge Haverfordwest | 30.4 | 36.9 | 36.8 | 34.3 | 32.3 | 31.2 | | | | | | | |
| Merlins Bridge 2 Haverfordwest | | 31.7 | 42 | 37.9 | 34.8 | 33.1 | | | | | | | |
| Haroldston Terrace Haverfordwest | | 19.5 | 28.4 | 25.2 | 23 | 24.9 | | | | | | | |
| Albert St Haverfordwest | 40.5 | 47.2 | 52.6 | 3.9 * | 41.9 * | 40.4 * | | | | | | | |

| Albert St 2 Haverfordwest | | 23 | 25.5 | 21.9 | 21.2 | 25.3 |
|------------------------------------|------|------|------|-------|------|------|
| Barn St 1 Haverfordwest | | 23.4 | 32.1 | 28.1 | 24.8 | 25.2 |
| Barn St 2 Haverfordwest | | 21 | 23.7 | 20.4 | 18.5 | 19.8 |
| Shipmans Lane Haverfordwest | | 20.7 | 25.5 | 22.4 | 20 | 19.5 |
| St Thomas Green Haverfordwest | 17.4 | 20.6 | 21 | | | |
| Portfield Haverfordwest | 24.2 | 26.3 | 25.2 | | | |
| Miford Rd Haverfordwest | 18 | 21.3 | 22.9 | | | |
| Scarrowscant Lane Haverfordwest | 14.6 | 16.1 | 14.2 | | | |
| High St Narberth | | | | 23.5 | 23.4 | 24.6 |
| Main St Pembroke | | | | 0.4 * | 37.7 | 37 |
| Main St 2 Pembroke | | | | 28.5 | 27 | 24.6 |
| Main St 3 Pembroke | | | | 14.3 | 14 | 15.6 |
| A40 Robeston Wathan | | | | 9 | 8.9 | 9.9 |
| Salutation Square Haverfordwest | | | | 22.6 | 21.2 | 22.2 |
| Prendergast Haverfordwest | | | | 23.1 | 22.3 | 22.8 |
| Main St, Solva | | | | | | 11.9 |
| Nun St, St Davids | | | | | | 9.9 |
| New St, St Davids | | | | | | 9.3 |
| Main St, Newport 1 | | | | | | 15.4 |
| Main St, Newport 2 | | | | | | 23.2 |
| Quay St, Haverfordwest 1 | | | | | | 34.9 |
| Quay St, Haverfordwest 2 | | | | | | 19.9 |

Table 60: Bias adjusted annual mean nitrogen dioxide levels 2014-2016

| Location | Bias A ad | justed annual mean NO ₂ (Bias A x Mean) | level µg/m³ |
|---|-----------------------|---|-----------------------|
| | 2014 Bias A = 0.81 | 2015 Bias A = 0.91 | 2016 Bias A = 0.92 |
| PCC1 Salutation Square Haverfordwest | 19.7 | 22.8 | 21.2 |
| PCC2 Picton Place Haverfordwest | 29.2 | 25.5 | 26.8 |
| PCC3 Victoria Place Haverfordwest | 25.8 | 26.7 | 24.3 |
| PCC4 High St Haverfordwest | 30.7 | 33.8 | 33.2 |
| PCC5 High St Haverfordwest | 38.5 | 39.5 | 38.9 |
| PCC6 High St Haverfordwest | 36.9 | 34.3 | 34 |
| PCC7 High St Haverfordwest | 37.7 | 39.1 | 38.5 |
| PCC8 High St Haverfordwest | 34.3 | 31.5 | 31.1 |
| PCC9 Dark St Haverfordwest | 23.3 | 25.4 | 22.3 |
| PCC10 Dark St Haverfordwest | 17.6 | 18.5 | 17.2 |
| PCC11 Dew St Haverfordwest | 31.1 | 31.1 | 30.4 |
| PCC12 Dew St Haverfordwest | 33.8 | 30.9 | 28.9 |
| PCC13 Dew St Haverfordwest | 30.1 | 30.8 | 29.3 |

| PCC14 Dew St Haverfordwest | 25.4 | 25.7 | 24.6 |
|------------------------------------|------|------|------|
| PCC15 Dew St Haverfordwest | 30.8 | 30.1 | 29.5 |
| PCC 16 Shipmans Lane Haverfordwest | 17.5 | 20.4 | 20.2 |
| PCC17 Albert St Haverfordwest | 25.3 | 30.3 | 30.8 |
| PCC18 Albert St Haverfordwest | 39.4 | 35.1 | 39.1 |
| PCC19 Albert St Haverfordwest | 18 | 24.8 | 26.3 |
| PCC20 Albert St Haverfordwest | 27.7 | 38.7 | 40.3 |
| PCC21 Albert St Haverfordwest | 26.8 | 18.3 | 17.8 |
| PCC22 Albert St Haverfordwest | 25.2 | 36.6 | 38.7 |
| PCC23 Albert St Haverfordwest | 39.8 | 29.2 | 25.7 |
| PCC24 Albert St Haverfordwest | 37 | 39.1 | 38.2 |
| PCC25 Albert St Haverfordwest | 40.2 | 28.1 | 24.6 |
| PCC 26 Albert St Haverfordwest | 43.7 | 37.8 | 38.6 |

Source: PCC Air Quality Review 2010, 2014, 2017

Narberth AURN

There were no exceedances of nitrogen dioxide levels at Narberth Automated Urban Rural Network (AURN) and RWE npower (RWE) Pembroke Power Station (at Pennar Cants ceased 2016).

Table 61: Nitrogen dioxide levels (µg/m³) monitored at AURN sites Narberth 2004-2016, and RWE 2011-2016

| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2011 | | 2012 | | 2013 | | 2014 | | 2015 | | 2016 |
|-----------------------|------|--------|------|------|------|-------|-------|------|------|------|------|------|------|-----|------|-----|------|
| | Nark | erth A | URN | | | | AURN | RWE | AURN | RWE | AURN | RWE | AURN | RWE | AURN | RWE | AURN |
| Annual Mean | 5.3 | 5.1 | 5.3 | 5.5 | 5.75 | 5.17 | 4.93 | 11.6 | 6 | 7 | 6 | 11.6 | 4 | 7 | 3 | 5 | 3 |
| Max Hourly Mean | 55.6 | 57.7 | 61.9 | 60.7 | 84.8 | 114.8 | 183.9 | 81 | 77 | 39.5 | 152 | 61 | 70 | 63 | 52 | 52 | 61 |
| Data capture (%) | 94 | 95 | 94 | 88 | 95 | 93 | 99 | 97 | 76 | 99 | 99 | 98 | 98 | 98 | 99 | 99 | 93 |

UK Air Quality Strategy objective by 31.12.2005: $NO_2 = 200 \ \mu g/m^3$ not to be exceeded more than 18 times per year (one hour mean) and 40 $\mu g/m^3$ annual mean.

Source PCC Air Quality Review 2008, 2010, 2014, 2017.

Sulphur dioxide (SO₂)

The UK Air Quality Strategy objectives (2007) for SO₂ are:

- 350µg/m³ not to be exceeded more than 24 times per year (one hour mean);
- 24-hour mean of 125µg/m³ to be exceeded no more than 3 times per year;
- 266µg/m³ not to be exceeded more than 35 times per year (15 minute mean measured as the 99.9th percentile).

Sulphur dioxide levels at Narberth AURN & RWEnpower

Both monitoring sites did not exceed the 24 hour mean or the 15 minute mean objectives in 2017 (PCC Air Quality Review, 2017).

Source: PCC Air Quality Review 2017

Particulate matter (PM10)

Table 62: PM₁₀ level (µg/m³ gravimetric) measured at Narberth AURN site and RWE

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 201 | | 201 | | 201 | 3 | 201 | 4 | 201 | 5 | 2016 |
|----------------------|-------|------|------|---------|------|------|------|------|-----|------|------|------|------|------|------|------|-----|------|
| | | | Narb | erth Al | JRN | | | AURN | RWE | AURN | RWE | AURN | RWE | AURN | RWE | AURN | RWE | AURN |
| Max 24 hr mean | 66.5 | 34.6 | 35.9 | 42.9 | 179 | 113 | 118 | 71 | 76 | 59 | 73.7 | 64 | 37.8 | 10 | 46 | 47 | 57 | 50 |
| Annual mean | 17.42 | 12.9 | 15.9 | 13.4 | 17.6 | 27.5 | 11.5 | 23 | 23 | 9 | 17 | 16 | 18.7 | 3 | 19.7 | 12 | 17 | 12 |
| Data capture (%) | 73 | 94 | 95 | 94 | 88 | 95 | 93 | 73 | 99 | 97 | 99 | 87 | 94 | 98 | 64 | 87 | 94 | 95 |

Source PCC Air Quality Review 2007, 2010, 2014, 2017

Air Quality Strategy objective for PM₁₀ to be met by the 31/12/2004 are:

- 50µg/m³ not to be exceeded more than 35 times a year (24 hour mean);
- 40µg/m³ annual mean.

The results indicate that there have been exceedances of the PM₁₀ for the 24hour mean in 2007 to 2013 at the AURN site and in 2011, 2012 and 2015 at the RWE site. The annual mean has not exceeded 40µg/m³ at either site.

Pembrokeshire County Council does not monitor PM_{2.5}, carbon monoxide, 1,3-butadiene and lead as previous monitoring has indicated that it is highly unlikely that these Air Quality Objectives would be breached (PCC Air Quality Review and Assessment Progress Report, 2017).

Number of days of moderate or high air pollution in Narberth (rural)

Concentrations of pollutants are analysed to determine the number of days which the pollution was moderate or higher. This is when concentrations for at least one of the pollutants exceed the National Air Quality Standards. The variation in ozone levels which is the main cause of pollution in rural areas is affected by weather conditions such as higher temperature.

Table 63: Number of days of moderate or high air pollution in Narberth 1997-2017

| _ | Table del Hamber et daye et mederate et riight an penatien in Hamberti 1007 2011 | | | | | | | | | | | | | | |
|---|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Ī | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Ī | 41 | 25 | 41 | 25 | 33 | 28 | 41 | * | * | 7 | 19 | 3 | 8 | 11 | 8 |

^{*}Narberth was excluded for giving incorrect measurements during 2004 and failing data capture rules in 2005 (Key Environmental Statistics for Wales, 2007)

Source: Narberth AURN da (gov.uk, 2017)

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/702081/APE_site_data_tables.ods

Ozone

Ozone is measured at Narberth AURN.

Table 64: Annual mean of the ozone daily maximum 8 hour running mean (average of µg/m³)

| | 2007 | 2008 | 2009 | 2011 | | 2012 | | 2013 | | 2014 | | 2015 | | 2016 |
|-------------------------|---------------|------|------|-------|-----|------|------|------|------|------|-----|------|-----|------|
| Annual Mean | Narberth AURN | | RN | AURN | RWE | AURN | RWE | AURN | RWE | AURN | RWE | AURN | RWE | AURN |
| µg/m₃ | 60 | 61.7 | 60.3 | 60.1 | 60 | 60 | 62.6 | 64 | 65.5 | 62 | 69 | 63 | 68 | 59 |
| Max Daily Mean µg/m3 | 73.6 | 120 | 106 | 109.5 | 143 | 112 | 104 | 105 | 108 | 93 | 100 | 93 | 104 | 104 |
| Data capture (%) | 10 | 72 | 94 | 95 | 83 | 97 | 98 | 99 | 94 | 98 | 71 | 99 | 95 | 99 |

The Air Quality Strategy objective for Ozone is:

• 100µg/m³ not to be exceeded more than 10 times a year (8 hour mean);

The results indicate that there have been small exceedances of the ozone objectives at Narberth since 2008, with the exception of 2014 and 2015. The RWE site exceeded the objective in 2011 and has also been slightly above from 2012 to 2015.

Air Quality Issues/constraints/gaps

The main sources of air pollutants in Pembrokeshire are road traffic, power generation and other heavy industries. Air Quality Strategy objectives are not all being met and future developments may further impact localised air quality. Increased traffic in particular hotspots (Pembroke and Haverfordwest AQMAs) can have an impact on localised air quality. There have been issues with dust (PM₁₀) from quarries and dust suppression takes place. Number of days moderate or high air pollution per year has generally decreased.

The LDP should support policies and strategies to improve air quality and maintain current good air quality. Air quality impacts should be taken into account when considering developments.

The air quality SA objective is closely related to the climatic factors objectives and incorporates the need to reduce greenhouse gas emissions, and also to reduce the impacts from transport, industry and power generation on air quality. The objective also takes account of the health impacts of air quality.

Sources:

Air quality strategy

PCC Progress Reports 2008, 2010, 2014, 2017

http://old.pembrokeshire.gov.uk/content.asp?nav=1626,2380,110,935&parent_directory_id=646&id=5634 https://www.pembrokeshire.gov.uk/pollution-control/air-quality

Pembrokeshire Air Quality Management Areas Action Plan <a href="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=4204&language="https://www.pembrokeshire.gov.uk/objview.asp."https://www.pembrokeshire.gov.uk/objview.asp.

9. Material Assets

Waste

Table 65: PCC total collected waste arisings, 2006/07 to 2014/15 (Tonnes)

| Year | 06/07 | 07/08 | 08/09 | 09/10 | 10/11 | 11/12 | 12/13 | 13/14 | 14/15 |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Tonnes | 78,054 | 74,148 | 70,915 | 69,132 | 68,907 | 65,308 | 64,516 | 67,729 | 68,074 |
| Percentage | | -5.00% | -4.36% | -2.51% | -0.33% | -5.22% | -1.21% | 4.98% | 0.51% |
| Change | | | | | | | | | |

Source: South West Wales Region Waste Planning Monitoring Report 2016 https://gov.wales/docs/desh/publications/170223wpmr-south-west-wales-region-en.pdf

There has been a decline in the total amount of waste being produced in Pembrokeshire, but since 2013 the figure has returned to 2010/11 levels of waste. These figures do not take into account the amounts being re-used, recycled or composted, but they do indicate an overall trend in reducing in the amount of waste being produced overall.

Target: Stabilisation and reduction of household waste

- By 2009/10 (and to apply beyond) waste arisings per household should be no greater than those (for Wales) in 1997/98;
- By 2020 waste arisings per person should be less than 300kg per annum.

Target Type: Secondary.

Source: South West Wales Regional Waste Group, Annual Monitoring Report 2007 http://www.walesregionalwasteplans.gov.uk/pdfs/sw_pdf/Annual_Monitoring_Report_April_2007.pdf

PCC municipal waste reuse/recycling/composting rates

Table 66: Total Recycling and composting figures as a percentage of arisings, 2006/07 to 2014/15

| Year | 06/07 | 07/08 | 08/09 | 09/10 | 10/11 | 11/12 | 12/13 | 13/14 | 14/15 | 15/16 | 16/17 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| % | 26.5 | 30.3 | 38.9 | 44.3 | 48.9 | 50.0 | 53.1 | 60.3 | 65.4 | 64.9 | 65.3 |

Note: Includes household and non-household sources. The data excludes abandoned vehicles / incinerator bottom ash / beach cleansing wastes / rubble. The use of this data source avoids any potential for the skewing of data and gives a more accurate impression of each local authority's performance against the respective targets.

Source: WG - Local authority municipal waste management 2016-17 https://gov.wales/statistics-and-research/local-authority-municipal-waste-management/?lang=en

Future trend

Since LDP1, the rate for re-use, recycling and composting have overtaken the percentage of waste being sent to landfill. However, the year on year increase has started to stabilise at 65% since 2014/15 which has prompted Pembrokeshire County Council to divide the collection streams in order to meet targets set in 'Towards Zero Waste'.

Source: PCC – Waste and Recycling Proposals https://www.pembrokeshire.gov.uk/newsroom/find-out-more-about-waste-and-recycling-proposals

Targets

Target – Reuse, Recycling and Composting of Local Authority Collected Waste:

- By 2012/13 achieve at least 52% of preparing for reuse and recycling/composting (or Anaerobic Digestion (AD));
- By 2015/16 achieve at least 58% of preparing for reuse and recycling/composting (or AD);
- By 2019/20 achieve at least 64% of preparing for reuse and recycling/composting (or AD);
- By 2024/25 achieve at least 70% of preparing for reuse and recycling/composting (or AD)

Target Type: WG.

Comparators

The South West Wales Region Waste Planning Monitoring Report indicates that Pembrokeshire was above the regional average of 59.8% for reuse, recycling and compost with 64.9%. However, the figures have stabilised in recent years and new strategies will need to be developed to guarantee that the 2019/20 target of 64% is met in order to avoid financial penalties.

Landfills

Table 67: Annual Landfilled waste figures for Pembrokeshire County Council, 2006 to 2015

| Years | 06/ 07 | 07/08 | 08/09 | 2009- | 12/13 | 13/14 | 14/15 |
|----------------------------|--------|--------|--------|-------|--------|--------|--------|
| | | | | 2012 | | | |
| Total tonnage of municipal | 54,109 | 48,904 | 43,356 | No | 29,182 | 20,004 | 10,465 |
| wastes sent to landfill | | | | Data | | | |

Withyhedge Landfill is Pembrokeshire's only putrescible and Materials Recycling Facility landfill and is the destination for the orange and black bag weekly collections from around the County. The site also processes residual waste for transport to a Pembroke Dockyard in order to ship the material to an energy from waste facility in Sweden.

Future waste figures

Table 68: Article 5 (1) of the EC Landfill Directive insists:

| Year | Target | BMW Landfill |
|------|--|--------------|
| | | Allowance |
| 2010 | No more than 75% of the BMW produced in 1995 can be landfilled | 29,481 |
| 2013 | No more than 50% of the BMW produced in 1995 can be landfilled | 19,516 |
| 2020 | No more than 35% of the BMW produced in 1995 can be landfilled | 13,702 |

(BMW = Biodegradable Municipal Waste)

Table 69: BMW Landfill allowances and actual landfill amount

| | 04/05 | 05/06 | 06/ 07 | 07/08 | 08/09 | 09/10 | 10/11 | 11/12 | 12/13 | 13/14 | 14/15 |
|----------------|---------|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Total landfill | 550,000 | 1,022,000 | 944,000 | 866,000 | 788,000 | 710,000 | 630,000 | 550,000 | 470,000 | 450,000 | 430,000 |

| allowance in Wales (Tonnes) | | | | | | | | | | | |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Pembrokeshire Landfill Allowance (Tonnes) | 20,736 | 39,074 | 36,676 | 34,278 | 31,879 | 29,481 | 26,134 | 22,815 | 19,497 | 18,667 | 17,837 |
| Pembrokeshire Actual Landfilled (Tonnes) | N/A | N/A | N/A | 30,892 | 27,030 | 23,786 | 20,325 | 18,681 | 17,786 | 13,430 | 6,873 |
| Pembrokeshire Actual Landfilled as a percentage of the allowance | N/A | N/A | N/A | 90.1 | 84.8 | 80.7 | 77.8 | 81.9 | 91.2 | 71.9 | 38.5 |

Source: WG - Local authority municipal waste management 2016-17 https://gov.wales/statistics-and-research/local-authority-municipal-waste-management/?lang=en

Civic Amenity sites / Bring sites

In areas of Pembrokeshire under County Council's authority:

6 Civic Amenity sites: Crane Cross near Saundersfoot, Goodwick/Fishguard, Haverfordwest, Hermon, Pembroke Dock and St. Davids (National Park).

Future trend

The kerbside collection scheme should further reduce the amount of waste going to landfill after a recent stagnation in recycling/reuse rates.

Hazardous Waste

Table 70: Hazardous waste arisings by EWC chapter for SW Wales, 2007 to 2013

| Year | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|--------|--------|--------|--------|--------|--------|--------|--------|
| Tonnes | 58,517 | 39,504 | 43,606 | 35,517 | 35,152 | 28,166 | 38,919 |

Source: WG - Local authority municipal waste management 2016-17

https://gov.wales/statistics-and-research/local-authority-municipal-waste-management/?lang=en

Waste Licences

Pembrokeshire County Council has an arrangement with various organisations for collection, recycling and disposal of the following wastes:

| Service provided | Reference | Organisation | Contract start date | Contact expiry date | Extension Date |
|---|---------------|-----------------------------------|---------------------|---------------------|----------------|
| Collection, Treatment And Environmentally Sound DisposalL Of WEEE From DCF Sites In Pembrokeshire | PROC/0708/023 | Repic Ltd | 30/06/2007 | 31/12/2018 | N/A |
| Provision of a Facility(s) to Receive, Shred and Compost Quantities of Green Waste | PROC/1011/067 | CWM Environmental Limited | 31/03/2011 | 30/04/2018 | N/A |
| Provision of a Facility (s) for the Receipt and Reuse/Recycling of All Types of Wood | PROC/1314/083 | Griffiths Waste Management Ltd | 08/04/2014 | 30/04/2018 | N/A |
| Provision of a Licensed Facility of the Receipt and Reuse/Recycling of Gypsum Waste | PROC/1314/084 | D.I.Evans cyf | 01/04/2014 | 31/03/2019 | N/A |
| Provision of a Materials Recycling Facility | PROC/1516/004 | A J Recycling Limited | 01/10/2015 | 31/03/2019 | 18 |

| Provision of a Bulky Waste Collection & Secondary Processing Service | PROC/1213/093 | Pembrokeshire FRAME Limited | 01/04/2013 | 31/03/2019 | 36 |
|---|---------------|--------------------------------|------------|------------|----|
| Textile Collection Service for SE Wales Waste Management Group | PROC/1617/010 | JMP Wilcox and Company Ltd | 01/05/2016 | 30/04/2019 | 24 |
| Provision of a Facility to Receive and Recycle Street Sweepings and Gully Waste | PROC/1314/075 | Lawrence Landfill Ltd | 28/05/2014 | 30/04/2019 | 24 |

Sources:

PCC Tenders and Contracts – Current Waste & Environment Contracts https://www.pembrokeshire.gov.uk/tenders-and-contracts/current-contract-list

Waste Transfer Stations

Table 71: Pembrokeshire has a number of operational and non-operational (*) waste transfer stations

| Station | Location | Facility Type |
|---|-------------------------|--|
| Waterston Car Breakers | Waterston | End of life vehicle facility |
| Plot 9 Enviroventure | Waterston Ind. Estate | End of life vehicle facility |
| Plot 10 TBS | Waterston Ind. Estate | Household, Commercial and Industrial Transfer Stations (including treatment) |
| LAS Waste Ltd | Waterloo, Pembroke Dock | Household, Commercial and Industrial Transfer Stations (including treatment) |
| Jensons Metals | Pembroke Dockyard | Metal Recycling Site |
| Unit 41, Sundorne Products (llanidloes) Ltd | Pembroke Dockyard | Household, Commercial and Industrial Transfer Stations (including treatment) |
| Carew Car Dismantlers | Carew | End of life vehicle facility |
| Hughes & John Haulage | Whitehill | C&D MRF |
| Contractors & Aggregates | | |
| Recycling | | |
| Jay Metals | Nr. Llanfyrnach | End of life vehicle facility |
| Glogue Quarry | Llanfyrnach | Hazardous Waste Transfer Stations (including treatment) |
| A J Recycling | Boncath | I&C MRF |
| Withyhedge Material Recycling Facility | Rudbaxton | I&C MRF; Household Waste Recycling Centres |

| Griffiths Waste Solutions | Haverfordwest | Household, Commercial and Industrial Transfer Stations (including treatment) |
|----------------------------|---------------|--|
| Western Power Distribution | Haverfordwest | Hazardous Waste Transfer Stations (including treatment) |
| Lawrence Landfill Ltd | Haverfordwest | Inert Waste Transfer Stations (including treatment);Household, Commercial and Industrial Transfer Stations (including treatment);Household, Commercial and Industrial Transfer Stations (including treatment);Open Windrow Composting; Use/treatment of inert waste for land reclamation or construction |
| Withybush Hospital | Haverfordwest | |
| Transco | Haverfordwest | |

Data gaps and uncertainties

Many operators have licenses for waste transfer but don't use them, clouding the picture significantly.

Sources:

Natural Resources Wales (NRW) – Permitted Waste Sites https://naturalresources.wales/evidence-and-data/maps/find-details-of-permitted-waste-sites/?lang=en

Fly-tipping

Pembrokeshire County Council Corporate Plan 2017/18: Page 28 – Ref LSS24:

The time taken to remove fly tips improved last year from 3.9 days to 2.5 days. The number of incidents reported also reduced significantly between 2004/05 and last year, from 1633 to 1067.

Table 72:

| Ref: LWM 8 | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2009/10 | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15 | 2015/16 | 2016/17 | 2017/18 |
|------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Number of | 1272 | | | | | | | | | | | | |
| reported | | | | | | | | | | | | | |
| incidents | | | | | | | | | | | | | |
| Target Collection time | 3 days | | | | | | | | | | | | |
| Actual Collection time | 3 days | | | | | | | | | | | | 5 |

Source: Pembrokeshire Corporate Plan 2017/18 https://www.pembrokeshire.gov.uk/improvement-planning/corporate-plan

Future trend

Continued reduction of reported cases due to effective policing and greater educating of societal costs of fly-tipping, along with a gradual reduction in collection times – partly due to reduction in occurrences but primarily due to an appreciation of the importance of quick collection. Future targets should be more ambitious and aim to provide the most rapid response in Wales.

Owners of vehicles regularly caught fly-tipping will face tougher punishment "in an extension to the Clean Neighbourhoods and Environment Act 2005"

Comparators

Recommended targets set by WG are to:

- Reduce reported incidents by 20% over the next 10 years
- Removal of fly tipped material within 14 days for large incidents and 5 days for smaller incidents.

Sources:

https://www.pembrokeshire.gov.uk/improvement-planning/corporate-plan

https://naturalresources.wales/evidence-and-data/maps/find-details-of-permitted-waste-sites/?lang=en

https://www.pembrokeshire.gov.uk/tenders-and-contracts/current-contract-list

https://gov.wales/statistics-and-research/local-authority-municipal-waste-management/?lang=en

https://www.pembrokeshire.gov.uk/newsroom/find-out-more-about-waste-and-recycling-proposals

https://gov.wales/statistics-and-research/local-authority-municipal-waste-management/?lang=en

https://gov.wales/docs/desh/publications/170223wpmr-south-west-wales-region-en.pdf

Minerals and Aggregates Active quarries

The quarries in the area of Pembrokeshire under the jurisdiction of Pembrokeshire County Council are:

- 1. Blaencilgoed / Gellihalog limestone
- 2. Bolton Hill igneous
- 3. Slade Hall shale
- 4. Glogue slate waste
- 5. Cotts Lane shale
- 6. Penlan shale
- 7. Cefn sandstone
- 8. Plascwrt igneous
- 9. Popehill shale
- 10. Tangiers Farm shale
- 11. Cronllwyn Quarry slate waste
- 12. Treffgarne igneous
- 13. Gilfach shale
- 14. Rushacre Farm shale

Note that Treffgarne and Gilfach are dormant. The council is in the process of issuing a prohibition order at Treffgarne to ensure that further extraction cannot take place without further planning permission being granted. Gilfach may also require a prohibition order for a similar reason, but this is not being progressed at this stage.

Source: Pembrokeshire County Council Replacement Local Development Plan (Evidence Base) - Minerals Background Paper (June 2018)

PCNPA Quarries

A. Carew - Limestone

B. Rhyndaston - Igneous

C. Pantgwyn - Sand & Gravel

D. Trefigin Sand & Gravel

Penberry was issued with a prohibition order in June 2015 to restore the quarry to its natural state, whilst Syke is currently inactive.

Source: Pembrokeshire Coast National Park Replacement Local Development Plan (Evidence Base) – Minerals Background Paper (March 2018) http://www.pembrokeshirecoast.wales/default.asp?PID=761

Data Gaps and uncertainties

A long-standing 'three company confidentiality rule' means that detailed figures of production for individual quarries are kept in confidence, for competition reasons.

Reserves in 2016 (including PCNPA):

Crushed Rock Reserves and Landbanks: 27.09 million tonnes

Dormant Aggregate Reserves: 0 tonnes

Land Won Sand & Gravel Sales: 3.31 million tonnes

Marine Dredged Aggregate: 42.911 tonnes

Total Aggregate Reserves: 30.4 million tonnes

Aggregate reserves could be logically expected to decrease annually as minerals are a finite source. Reserves can however increase as a result of a quarry obtaining permission to expand its boundaries, and if quarries are successful in their planning permission applications, active reserves may increase. The distinction between 'inactive' and 'dormant' is complex and technical, related to the origins of the permissions granted (see para. 47 of MTAN 1). Based on recent shares of production Pembrokeshire

and PCNP would be expected to contribute 10.5 Mt over the next 15 years; on a per capita basis this would equate to 6.0 Mt (Regional Technical Statement, 2007)¹.

Currently there is one active limestone quarry; two active igneous quarries; one active slate quarry; one active sandstone quarry and six active shale quarries. This is one of the most diverse areas in terms of types of aggregate produced in South Wales.

The majority of the area is also within 30 km of an active sand wharf at Pembroke Dock.

The geology and the environmental capacity of the County are extremely varied making generalisation difficult, but resources in most areas apart from the hinterland and east, tend to have lower capacity (i.e. are sensitive to the establishment of mineral operations).

If Pembrokeshire was to be called upon to support demand currently met by PCNP, overall permitted reserves are still well in excess of a 15 year requirement, but the varied mix of materials contained in that overall reserve is far from evenly balanced and may necessitate some extra provision.

The current sand production is obtained from sites within the National Park. This will end in the future because the National Parks are not required to have quarries within them, therefore, a new site must be identified to fulfil the demand.

Although slate waste has been recycled for some years, this has been on a small scale and suitable resources are limited. Sources of CD & EW (construction demolition and excavation waste) are likely to be concentrated in the parts of the County with built up areas.

Data gaps

The report where these figures appeared advised caution when using the figures, as many involved some degree of estimation.

¹ The Pembrokeshire County Council and Pembrokeshire Coast National Park are grouped together for confidentiality reasons in the Draft Technical Statement)

Sources:

South Wales Regional Aggregates Working Party (SWRAWP). Annual Report 2016. http://www.swrawp-wales.org.uk/Html/SWRAWP%20Annual%20Report%202016.pdf

Welsh Assembly Government Minerals Technical Advice Note 1:Aggregates. March 2004. (MTAN 1).

Permissions (Table 73)

| Site name | Mineral type | Mineral extraction will end: |
|--|--------------|---------------------------------|
| Blaencilgoed / Gellihalog, near Ludchurch, site M1 | Limestone | 21st February 2042 |
| Bolton Hill, Tiers Cross, Site M2 | Igneous | 10 th February 2053 |
| Slade Hall Farm Quarry, Site M3 | Shale | 24 th May 2021 |
| Glogue Quarry, site M4 | Slate | 13 th September 2023 |
| Cotts Lane, Martletwy, site M5 | Shale | 30 th April 2018 |
| Penlan Farm, site M6 | Shale | 9 th June 2023 |
| Cefn, Cilgerran, site M7 | Sandstone | 3 rd July 2027 |
| Plascwrt Farm, Llangolman, site M8 | Igneous | 12 th November 2024 |
| Pope Hill, site M9 | Shale | 6 th September 2021 |
| Tangiers Farm, site M10 | Shale | 1 st October 2023 |
| Cronllwyn, site M11 | Slate waste | 3 rd November 2019 |
| Treffgarne (2 locations), site M12 | Igneous | 21st February 2042 |
| | | Currently a dormant site |
| Gilfach, site M13 | Shale | 21st February 2042 |
| | | Currently a dormant site |
| Rushacre Farm, site M16 | Shale | 17 th April 2022 |

Future trend

The large number of permissions expiring in 2042 are a legacy of decisions made during the Second World War to award unlimited permissions and consequent agreements in 1982 to make these last 60-years. The system now is far stricter in awarding

permissions and considers each case on its individual merits, with extensive consultation and surveys undertaken. Lengths of permissions can range from three to 20/30 years.

Sources:

Planning documents, conditions and legislation, Pembrokeshire County Council.

Aggregates (Table 74)

| | Crushed rock aggregate sales i | n million tonnes, Reserves in parenth | eses (million tonnes and years) |
|----------------------------|------------------------------------|---------------------------------------|-------------------------------------|
| Area | 2014 (Reserves at 31.12.14, Years) | 2015 (Reserves at 31.12.15, Years) | 2016 (Reserves at 31.12.16, Million |
| | | | Tonnes and Years) |
| Pembrokeshire (incl PCNPA) | 0.53 | 0.53 | 0.46 (27.09, 47yrs) |
| South West Wales | 1.84 | 1.81 | 1.69 (178.00, >50yrs) |
| South East Wales | 2.81 | 3.22 | 3.65 (193.00, >50yrs) |
| Powys (inc Brecon Beacons) | 3.22 | 3.28 | 3.07 (203.11, >50yrs) |

Data is available for sales, reserves and landbank for each local authority which shows that many authorities have a landbank in excess of 50 years, however, regional planning groups exist across South Wales in order to take account of the minerals available in each area and to spread the landbank requirements across the region.

Table 75

| | | Land wo | _ | ivel, total sale (million tonne | s (million tonnes) es & years) | and landbank |
|---------------|------------------------------|---------|------|------------------------------------|-----------------------------------|--------------|
| | | 2014 | 2015 | 2016 | 2016 La | ndbank |
| Powys (inc Bi | Powys (inc Breacon Beacons), | | | | | >50yrs |
| South West | Carmarthenshire | 0.20 | 0.07 | 0.16 | 3.31 | >50yrs |
| | Ceredigion | | 0.27 | 0.16 | 3.31 | 6 |
| | PCNP | | | | | N/A |

The SWRAWP report states that Ceredigion is the largest producer in the region which consequently shows a low landbank for the authority, whereas the remaining producers have relatively low output and small sites in Powys and Carmarthenshire. PCNPA is not required to have a landbank as a result of national park status and should not be relied upon for future production.

This combination means that as a region, new terrestrial sand and gravel resources will need to serve the area in order to meet current demand.

Table 76

| | | | Marine Dredged Aggregates (tonnes) | | | | | | | | | | |
|---------------------------------|---------------|-----------|------------------------------------|---------|-----------|---------|-----|---------|---------|---------|--|--|--|
| Area | Landing Port | 2004 | 2005 | 2006 | 2007 | 2008 | N/A | 2014 | 2015 | 2016 | | | |
| Pembrokeshire County Council | Pembroke Dock | 44,509 | 66,607 | 54,034 | 60,267 | 42,494 | N/A | 14,462 | 24,531 | 42,911 | | | |
| South Wales | | 1,071,344 | 1,001,767 | 951,968 | 1,070,981 | 846,458 | N/A | 632,843 | 653,756 | 651,584 | | | |

Note: The above excludes Bedwyn Sands in Monmothshire as a result of the site being above low water mark and, therefore, under the jurisdiction of the Local Planning Authority as opposed to the Crown Estate.

Sources:

South Wales Regional Aggregates Working Party – Annual Report 2004; 2005; 2006; 2007; 2008; 2016 http://www.swrawp-wales.org.uk/Html/publications.html

Recycling

A number of companies, separate to quarries, recycle material in Pembrokeshire using crushing machinery to make secondary aggregates suitable for road surfacing and concrete and so on.

A target for recycling C&D waste as aggregates was proposed for Wales of at least 40% by 2005 (MTAN1, 2004) and 70% in Towards Zero Waste.

The latest data from the Survey of Construction and Demolition Waste Generated in Wales 2012, shows that across Wales 90% of C&D waste was either re-used or recycled and only 2% was sent to landfill, comfortably beating the above targets.

Future trend

The recycling and re-use of aggregate will continue due to economic viability.

Sources:

South Wales Regional Aggregates Working Party – Annual Report 2006

South Wales Regional Aggregates Working Party – Annual Report 2007

South Wales Regional Aggregates Working Party – Annual Report 2008

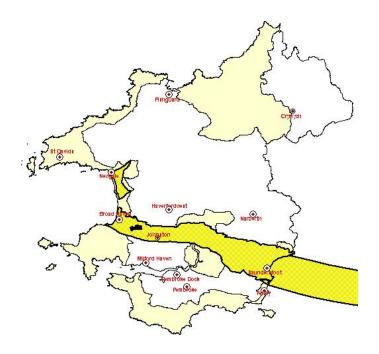
South Wales Regional Aggregates Working Party - Annual Report 2016

Welsh Assembly Government Minerals Technical Advice Note - Aggregates. March 2004

Coal Reserves

The Pembrokeshire Coalfield is predominately in a band some 2-6 miles wide from the Tenby to Telpyn Point coast in the east, to the Little Haven to Haroldston West coast in the west. There is also a coastal section between Nolton Haven and Newgale on the same coast of St Brides Bay. There are no accurate records of the quantity, quality or arrangement of remaining coal deposits in Pembrokeshire.

Figure 5: The lightly shaded area on the map below shows the Pembrokeshire Coast National Park, with the yellow area denoting the location of the Pembrokeshire Coalfield.



Future trend

No coal is mined in Pembrokeshire and there are no plans to do so, but Pembrokeshire County Council Local Development Plan does have an element of safeguarding in policies GN.22 & 23 of the Local Development Plan.

Source:

Pembrokeshire County Council Local Development Plan (Adopted 28th February 2013).

Quarry Restoration

When Pembrokeshire County Council gives permission for quarrying it will also provide guidance regarding restoration of the land once operations come to an end. The official reason for these planning conditions is often concerned with "ensuring the satisfactory restoration of the site in the interests of the amenity of the area", sometimes with reference to "local residents in particular".

Conditions can include demanding that no topsoil is taken away from the site, that no trees or shrubs are removed from the site and that any intrusions of Japanese Knotweed are eradicated fully. An over-riding aim of such conditions is to allow and promote the colonisation of the site by the natural flora and fauna of the locality. Many disused and restored quarries can provide a local biodiversity and geodiversity resource.

Such conditions have been applied to non-operational quarries in Pembrokeshire, which were listed under the 'Active Quarries' section.

Energy

Ecological footprint

Pembrokeshire had an ecological footprint of 5.3 global hectares per capita (gha/cap)² in 2003 which is marginally higher than the Welsh footprint (5.16 gha/cap), but lower than the UK footprint (see Table). The Ecological Footprint is a measure of how much land and sea area we use to support our lifestyles, compared with what is available. The 2011 update in the below table was conducted by the Welsh Government which did not use the same methodology as a result of available data sources and modelling. This means that a direct comparison cannot be made between 2008 and 2011.

Table 77: Ecological footprint in global hectares per capita

| Area | 2008 | 2011 |
|--|------|------|
| Pembrokeshire footprint | 5.3 | 3.36 |
| Wales Spatial Plan area: Pembrokeshire | 5.26 | |
| Haven | | |
| Wales footprint | 5.16 | 3.28 |
| UK footprint | 4.89 | |
| Global footprint | 2.2 | |
| Global capacity (refers to the biological | 1.8 | |
| land actually available on a global level) | | |

² Dawkins, E., Paul, A., Barrett, J., Minx, J. and Scott, K.: Wales' ecological footprint – Scenarios to 2020 (2008)

Future trend

Table 78: Potential ecological footprint reductions if waste reduction target is met

| | 3 | | |
|------|------------------|-----------------|-----------|
| Year | Total EF | EF per resident | Reduction |
| | gha / Wales / yr | Gha / cap / yr | |
| 2001 | 1,722,201 | 0.59 | - |
| 2020 | 1,089,880 | 0.37 | 37% |

The above table is based on the assumption that Wales will meet the following waste reduction target:

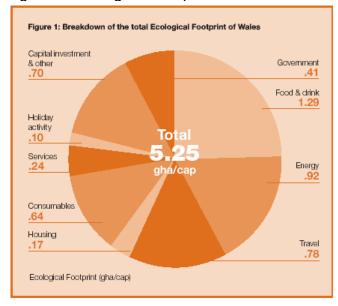
'By 2020 waste arisings per person should be less than 300 kg per annum' compared to current production of 461 kg per person.

The footprint of Wales has increased at an average rate of 1.5% per year between 1990 and 2003. This closely mirrors the growth in Gross Value Added (GVA) in Wales over the same period. This trend is not unique to Wales and is replicated elsewhere in the UK.

If the historic growth in footprint were to continue at rate of 1.5% a year, this would result in an ecological footprint 20% higher than the 2003 figure (6.19gha/capita) in 2020.

Three broad areas of household consumption contribute 63% of the footprint of Wales; these are housing, food and personal travel. The report Wales' ecological footprint – Scenarios to 2020 (2008) illustrates how consumption in these areas may change over time, modelling scenarios from 2001 to 2020.

Figure 6: Ecological Footprint of Wales - Breakdown of the 5.25gha/cap in 2008 and of the 3.28gha/cap in 2011



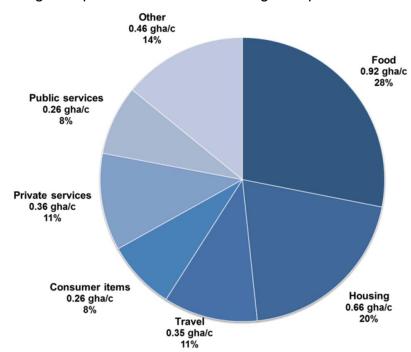
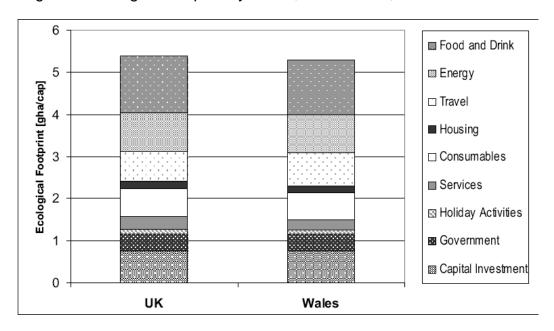
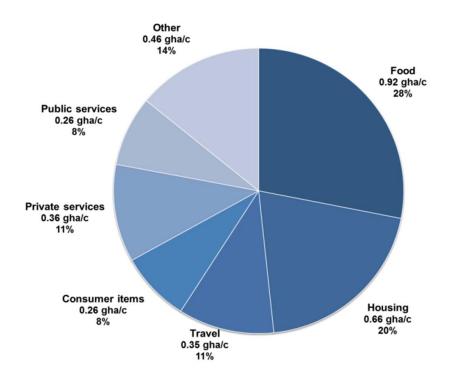


Figure 7: Ecological footprint by sector, Wales & UK, 2001:



Ecological footprint by sector, Wales only, 2011:



Sources:

Reducing Wales' Ecological Footprint, March 2005. Stockholm Environmental Institute & WWF Cymru - http://www.sei.se/index.php?page=pubs&pubaction=showitem&item=13

See also 'Report summary' - http://www.wwf.org.uk/filelibrary/pdf/redwalesfoot05_eng.pdf

(5) The Footprint of Wales, A Report to the Welsh Assembly Government, WWf Cymru, 2002.

Wales' ecological footprint – Scenarios to 2020 (2008) http://sei-international.org/mediamanager/documents/Publications/Future/wales_ecological_footprint_report_270508_final.pdf

Ecological footprint of Wales report (2011)

https://gov.wales/topics/environmentcountryside/climatechange/publications/ecological-footprint-of-wales-report/?lang=en

Energy consumption per building and per occupant

http://www.pembrokeshire.gov.uk/content.asp?Language=&id=10328&nav=101,154,983&parent_directory_id=646

This page on the Council's website summarises the measures towards reducing energy consumption undertaken throughout the County's public buildings, which include schools, council offices, leisure centres and so on. However, it is short on quantified data.

Comparators

The UK building stock is directly responsible for approximately 50 per cent of UK's energy use and carbon emissions.

Data gaps and uncertainties

Data is available for public buildings over 1000m², but so far there has not been a comprehensive review of energy consumption in all of Pembrokeshire's buildings. It has been suggested that a 'per occupant' measure would be misleading, given that occupancy varies over the time of day, week, year and so on.

Sources:

Pembrokeshire County Council Transportation and Environment department
Parliamentary Select Committee on Science and Technology Memo – October 2004
Welsh European Funding Office. A practical guide to promoting environmental sustainability – Energy

Electricity and gas use

Western Power Distribution is responsible for electricity supplies across South Wales and South West England. Wales & West Utilities is the area's gas supplier. Comprehensive consumption figures for Local Authorities and Regions are provided annually by the Department for Business, Enterprise and Regulatory Reform. Figures for electricity use are higher in Pembrokeshire than Wales and figures for gas are lower than the Wales average.

Table 79

| Regional and loca consumption state | al electricity :istics (experimental) | 20 | 03 | 20 | 04 | 20 | 05 | 20 | 006 | 20 | 007 | 20 | 800 |
|---|---|---------|---------|--------|---------|----------|----------|--------|----------|---------|----------|---------|----------|
| NUTS4 Area and (Region: | | Pembs | Wales | Pembs | Wales | Pembs | Wales | Pembs | Wales | Pembs | Wales | Pembs | Wales |
| | Sales – GWh | 242 | 5,196 | 263 | 5,602 | 265 | 5,656.0 | 260 | 5,600 | 246 | 5,398 | 250.6 | 5,307.2 |
| Domestic consumers | Number of MPANs * (thousands) | 50.3 | 1,211.5 | 54.4 | 1,305.1 | 55.2 | 1,315.1 | 56.0 | 1,328 | 54.1 | 1,303 | 57.6 | 1,338.5 |
| | Sales – GWh | 638 | 9,961 | 787 | 10,970 | 798 | 11,910.6 | 782 | 11,794 | 816.7 | 11,233.7 | 806.1 | 10,960.0 |
| Commercial and Industrial Consumers | Number of MPANs (thousands) | 4.6 | 99.1 | 8.0 | 130.1 | 8.3 | 134.5 | 7.9 | 125 | 7.7 | 124.2 | 8.0 | 122.9 |
| | Sales – GWh | 880 | 15,158 | 1,051 | 16,572 | 1,063 | 17,566.1 | 1,042 | 17,394 | 1,063 | 16,632.6 | 1,056.8 | 16,267.1 |
| All Consumers | Number of MPANs (thousands) | 54.9 | 1,310.6 | 62.4 | 1,435.2 | 63.0 | 1,449.5 | 63.9 | 1,454 | 61.8 | 1,427.2 | 65.6 | 1,461.4 |
| | Average domestic consumption kWh | 4,824 | 4,289 | 4,843 | 4,293 | 4,801 | 4,300.5 | 4,640 | 4,215.1 | 4,556 | 4,143 | 4,355 | 3,965 |
| Sales per consumer | Average industrial and commercial consumption kWh | 138,189 | 100,529 | 97,890 | 84,315 | 96,609.0 | 88,584.2 | 99,270 | 94,290.7 | 105,668 | 90,462 | 100,429 | 89,182 |
| Sales per household | Average domestic consumption kWh | - | - | - | - | - | - | - | - | 4,896 | 4,328 | 4,829 | 4,132 |

| Wales electricit statistics | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
|--------------------------------|-------------------------------|--------|--------|-------|--------|--------|--------|--------|-------|
| | Sales – GWh | 5322 | 5,361 | 5,287 | 5,229 | 5,180 | 5,182 | 5,164 | 5,020 |
| Domestic consumers | Number of MPANs * (thousands) | 1,361 | 1,369 | 1,375 | 1,381 | 1,386 | 1,388 | 1,401 | 1,409 |
| | Sales – GWh | 10,398 | 10,457 | 9,939 | 11,794 | 10,366 | 11,644 | 10,246 | 9,755 |

| Commercial and Industrial Consumers | Number of MPANs (thousands) | 124 | 124 | 124 | 124 | 124 | 128 | 128 | 129 |
|---|---|--------|--------|--------|--------|--------|--------|--------|--------|
| | Sales – GWh | 15,720 | 15,818 | 15,226 | 15,267 | 15,546 | 16,826 | 15,410 | 14,775 |
| All Consumers | Number of MPANs (thousands) | 1,485 | 1,493 | 1,499 | 1,505 | 1,510 | 1,516 | 1,529 | 1,538 |
| | Average domestic consumption kWh | 3,911 | 3,916 | 3,845 | 3,787 | 3,736 | 3,735 | 3,689 | 3,562 |
| Sales per consumer | Average industrial and commercial consumption kWh | 83,594 | 84,541 | 80,439 | 81,024 | 83,502 | 88,907 | 80,278 | 75,828 |
| Sales per household | Average domestic consumption kWh | 4,069 | 4,066 | 3,946 | N/A | 3,928 | 3,930 | 3,131 | 3,223 |

| Pembrokeshire el statistics | ectricity consumption | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------------------|----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Sales – GWh | 248 | 251 | 244 | 243 | 238 | 240 | 238 | 231 |
| Domestic consumers | Number of MPANs * (thousands) | 58 | 59 | 59 | 59 | 60 | 60 | 60 | 61 |
| | Sales – GWh | 962 | 870 | 900 | 803 | 828 | 797 | 817 | 772 |
| Commercial and Industrial Consumers | Number of MPANs (thousands) | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | Sales – GWh | 1,210 | 1,121 | 1,144 | 1,046 | 1,067 | 1,037 | 1,055 | 1,003 |
| All Consumers | Number of MPANs (thousands) | 66 | 67 | 67 | 67 | 68 | 68 | 69 | 69 |
| | Average domestic consumption kWh | 4,273 | 4,283 | 4,145 | 4,114 | 4,006 | 4,019 | 3,954 | 3,809 |

| Sales per consumer | Average industrial and commercial consumption kWh | 119,721 | 108,581 | 111,280 | 99,420 | 103,220 | 94,449 | 98,664 | 92,557 |
|------------------------|---|---------|---------|---------|--------|---------|--------|--------|--------|
| Sales per household | Average domestic consumption kWh | 4,736 | 4,769 | 4,519 | N/A | 4,428 | 4,464 | 4,150 | 4,226 |

MPANs - Meter Point Administration Numbers

Sources:

2003/2004: http://www.berr.gov.uk/files/file45727.xls 2005/2006: http://www.berr.gov.uk/files/file45726.xls

2007/2008:

http://www.decc.gov.uk/media/viewfile.ashx?filepath=statistics/regional/december09/1_20091222104451_e_@@_subnatelectricity0508.xls&filetype=4 http://www.decc.gov.uk/en/content/cms/statistics/regional/aspx

2008-2016: https://www.gov.uk/government/statistical-data-sets/regional-and-local-authority-electricity-consumption-statistics

Table 80

| numbers of by region a 2005 | | | 2003 | | | | | 2005 | | 2006 | | 007 | 2008 | |
|-------------------------------------|--|---------|-----------|---------|-----------|---------|----------|---------|---------|---------|----------|---------|----------|--|
| NUTS4 Area Government Region: | | Pembs | Wales | Pembs | Wales | Pembs | Wales | Pembs | Wales | Pembs | Wales | Pembs | Wales | |
| Domestic | Sales – GWh | 542 | 20,278 | 628 | 20,735 | 552 | 19,889 | 543 | 19,599 | 523.2 | 18,837.5 | 503.9 | 18,254.6 | |
| Consumers | Number of consumers (thousands) | 28.38 | 992.00 | 32.11 | 1,001.02 | 30.85 | 1,041.74 | 31.2 | 1,060 | 31.8 | 1,073.4 | 32.1 | 1,079.9 | |
| Commercial | Sales – GWh | 237 | 21,009 | 319 | 22,357 | 137 | 14,422 | 128 | 12,803 | 123.1 | 12,100.2 | 118.9 | 11,429.5 | |
| and Industrial consumers | Number of consumers (thousands) | 0.50 | 16.00 | 0.59 | 16.45 | 0.51 | 16.08 | 0.5 | 15 | 0.5 | 14.2 | 0.4 | 13.0 | |
| All | Sales – GWh | 779 | 41,287 | 946 | 43,092 | 688 | 34,311 | 671 | 32,401 | 646.3 | 30,937.7 | 622.8 | 29,684.2 | |
| Consumers | Number of consumers (thousands) | 28.88 | 1,008.00 | 32.71 | 1,017.47 | 31.36 | 1,057.83 | 31.7 | 1,075 | 32.3 | 1,087.6 | 32.6 | 1,092.9 | |
| Sales per | Domestic- kWh | 19,115 | 20,442 | 19,540 | 20,714 | 17,883 | 19,092 | 17,401 | 18,493 | 16,447 | 17,550 | 15,678 | 16,905 | |
| Consumer | Commercial and industrial – kWh | 470,651 | 1,313,063 | 536,077 | 1,358,914 | 265,927 | 896,725 | 269,936 | 827,908 | 270,566 | 850,389 | 289,203 | 879,465 | |

| Gas Sales and numbers of customers by region and area, 2016 NUTS4 Area/ LA Code and Government Office Region: | | 2009 | | 2010 | | 2011 | | 2012 | | 2013 | | 2014 | |
|---|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | | Pembs | Wales |
| Domestic | Sales – GWh | 467 | 16,587 | 458 | 16,142 | 418 | 14,997 | 410 | 14,905 | 398 | 14,477 | 387 | 13,851 |
| Consumers | Number of consumers (thousands) | 33 | 1,092 | 33 | 1,100 | 33 | 1,104 | 33 | 1,105 | 33 | 1,111 | 34 | 1,108 |
| Commercial | Sales – GWh | 116 | 10,403 | 108 | 10,327 | 97 | 9,691 | 109 | 9,371 | 106 | 8,976 | 138 | 13,851 |
| and Industrial consumers | Number of consumers (thousands) | 0 | 12 | 0 | 11 | 0 | 11 | 0 | 11 | 0 | 11 | 0 | 9 |
| All | Sales – GWh | 583 | 26,989 | 566 | 26,469 | 515 | 24,688 | 519 | 24,276 | 504 | 23,453 | 524 | 22,132 |
| Consumers | Number of consumers (thousands) | 33 | 1,104 | 34 | 1,111 | 33 | 1,114 | 34 | 1,116 | 34 | 1,122 | 34 | 1,118 |
| Sales per | Domestic- kWh | 14,279 | 15,187 | 13,764 | 14,674 | 12,646 | 13,590 | 12,359 | 13,484 | 11,918 | 13,029 | 11,508 | 12,497 |
| Consumer | Commercial and industrial – kWh | 313,959 | 903,327 | 288,506 | 918,636 | 274,750 | 893,336 | 314,337 | 870,658 | 311,396 | 833,518 | 410,150 | 879,840 |

| Gas Sales and numbers of customers by region and area, 2016 | | 20 | 2015 | |)16 |
|---|---------------------------------|---------|---------|---------|---------|
| NUTS4 Area/ LA Office Region: | Code and Government | Pembs | Wales | Pembs | Wales |
| | Sales – GWh | 384 | 13,814 | 386 | 13,831 |
| Domestic Consumers | Number of consumers (thousands) | 34 | 1,124 | 35 | 1,139 |
| | Sales - GWh | 136 | 9,012 | 140 | 10,213 |
| Commercial and Industrial consumers | Number of consumers (thousands) | 0 | 10 | 0 | 11 |
| | Sales - GWh | 520 | 22,826 | 526 | 24,044 |
| All Consumers | Number of consumers (thousands) | 34 | 1,134 | 35 | 1,150 |
| | Domestic-kWh | 11,297 | 12,291 | 11,119 | 12,142 |
| Sales per Consumer | Commercial and industrial – kWh | 398,320 | 863,709 | 400,803 | 972,616 |

Sources:

2003 http://www.berr.gov.uk/files/file11886.xls

2004 http://www.berr.gov.uk/files/file18546.xls

2005/2006/2007/2008

http://www.decc.gov.uk/media/viewfile.ashx?filepath=statistics/regional/december09/1_20091222104505_e_@@_subnatgas0508.x ls&filetype=4

http://www.decc.gov.uk/en/content/cms/statistics/regional/regional.aspx

2009-2016 https://www.gov.uk/government/statistical-data-sets/gas-sales-and-numbers-of-customers-by-region-and-local-authority

Renewable Energy

The Non-Fossil Purchasing Agency Ltd had contracts with six renewable energy providers in Pembrokeshire (excluding Park areas) in 2008.

Table 81 – Renewable Energy Contracts in 2008

| Name of site | Type of energy produced | Contracted capacity (MW) |
|-----------------------|-------------------------|--------------------------|
| Llys y fran | Hydro | 0.25 |
| Withyhedge | Municipal & Industrial | 8.073; |
| | Waste; Landfill Gas | 2.422 |
| Rhoscrowther, Angle | Wind | 0.947 |
| Mynydd Cilciffeth, | Wind | 3.371 x 2 |
| Puncheston (A & B) | | |
| Jordanston | Wind | 4.214 |
| Trenewydd, Puncheston | Wind | 2.739 |
| | | TOTAL = 25.387 |

Table 82: Renewable Energy in Pembrokeshire

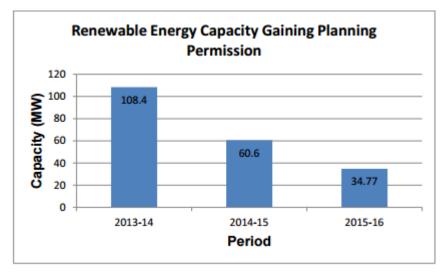
| Technology | Capacity [MWe] |
|---------------------|-------------------|
| Landfill gas | 1.4 |
| Sewage gas | 1.2 |
| Anaerobic Digestion | 2.2 |
| Biomass | 25 |
| Hydro | 1.08 |
| PV > 1MW | 203.79 |
| PV < 1MW | 1.181 |

| Total | 268.9728 |
|--------------|----------|
| Wind <0.1MW | 1.5018 |
| Wind > 0.1MW | 31.72 |

Source: LDP Renewable Energy Assessment 2017

https://www.pembrokeshire.gov.uk/local-development-plan-review/ldp2-evidence-base

Table 83 – Renewable energy capacity gaining planning permission from 2013 to 2016



The amount of energy produced from renewable sources in 2008 was negligible at just 25MW, but has since increased by 1000% to 269MW.

Future trend

Between 2008 and 2017 the renewable energy capacity substantially increased, but this is likely to increase at a much reduced rate or stagnant due to a decline in renewable energy projects and gaining planning permission.

ComparatorsTable 84 – Energy Statistics for each Local Authority in Wales 2016

| Local authority electricity and renewable heat | | Renewable heat | t and electricity | | F | ossil fuel electricit | / |
|--|--------------------|------------------------|----------------------------------|--|--------------------|------------------------------|-----------------------------|
| generation totals | Number of projects | Total capacity (MW) | Estimated generation (GWh) | CO ₂ savings (tonnes CO ₂) | Number of projects | Electrical capacity (MWe) | Estimated generation (GWh)* |
| Blaenau Gwent | 1,021 | 16.0 | 27 | 10 | 2 | 32.0 | - |
| Bridgend | 2,539 | 104.5 | 219 | 89 | 4 | 25.2 | - |
| Caerphilly | 2,965 | 59.5 | 78 | 30 | 1 | 0.1 | - |
| Cardiff | 3,494 | 66.8 | 253 | 95 | 2 | 10.0 | - |
| Carmarthenshire | 5,266 | 218.0 | 384 | 145 | 1 | 10.0 | - |
| Ceredigion | 3,208 | 243.2 | 545 | 195 | 2 | 10.3 | - |
| Conwy | 1,799 | 71.8 | 154 | 59 | 3 | 2.0 | - |
| Denbighshire | 2,229 | 62.4 | 157 | 53 | 2 | 1.2 | - |
| Flintshire | 3,386 | 214.6 | 740 | 204 | 3 | 1,900.5 | - |
| Gwynedd | 3,009 | 111.3 | 203 | 75 | 1 | 0.1 | - |
| Isle of Anglesey | 2,173 | 78.5 | 144 | 57 | 1 | 0.1 | - |
| Merthyr Tydfil | 734 | 11.4 | 41 | 16 | 2 | 41.8 | - |
| Monmouthshire | 4,077 | 64.6 | 136 | 47 | 1 | 0.0 | - |
| Neath Port Talbot | 1,864 | 264.5 | 751 | 300 | 6 | 598.5 | - |
| Newport | 2,201 | 37.9 | 74 | 27 | 5 | 904.7 | - |
| Pembrokeshire | 4,703 | 225.4 | 275 | 104 | 5 | 2,330.5 | - |

| Powys | 6,222 | 298.9 | 769 | 257 | 4 | 0.7 | - |
|-------------------|--------|-------|-------|-------|----|---------|--------|
| Rhondda Cynon Taf | 3,944 | 219.7 | 552 | 220 | 8 | 71.9 | - |
| Swansea | 3,097 | 51.4 | 68 | 25 | 2 | 44.4 | - |
| Torfaen | 2,054 | 16.8 | 29 | 9 | 2 | 0.4 | - |
| Vale of Glamorgan | 2,172 | 118.7 | 478 | 195 | 5 | 1,892.0 | - |
| Wrexham | 4,815 | 73.8 | 166 | 50 | 5 | 24.5 | - |
| Offshore | 3 | 726.0 | 2,419 | 997 | - | - | - |
| Unknown | 46 | 1.8 | 4 | 1 | 5 | 30 | - |
| Total | 67,021 | 3,357 | 8,667 | 3,260 | 72 | 7,931 | 31,892 |

Sources:

Welsh Government - Energy Generation in Wales 2016

https://gov.wales/topics/environmentcountryside/energy/renewable/energy-generation-in-wales/?lang=en

Future trend

The Welsh Government has set a target for 70% of electricity demand to be met by 2030. As of 2016, the figure stood at 43% of demand being met by renewables.

Comparators

In 2016 Pembrokeshire consumed 10,003 GWh of electricity whilst producing 275GWh from renewable sources, equivalent to 2.75% of the total consumed. Based on these figures, Pembrokeshire as a County (including Pembrokeshire Coast National Park) will need to consent more renewable energy to meet the all Wales target of 70%.

As stated above, the target is for Wales as a whole and would not necessarily need to be met by Pembrokeshire due to variations across Wales that would meet the target.

Sources:

Source: LDP Renewable Energy Assessment 2017

https://www.pembrokeshire.gov.uk/local-development-plan-review/ldp2-evidence-base

Welsh Government - Energy Generation in Wales 2016

https://gov.wales/topics/environmentcountryside/energy/renewable/energy-generation-in-wales/?lang=en

Welsh Assembly Government Technical Advice Note 8. July 2005

Energy from Fossil Fuels

A new gas fired power station was completed in 2012 by RWE n-power at the former oil fired power station in Pembroke. It has a 2200MW capacity

Future trend

The National Grid has capacity for 2,000MW of energy to be generated in Pembrokeshire. This capacity is likely to be taken by renewable sources.

Refineries

In 2015 Milford Haven refinery ceased production due to the operational costs at the site. Murco sold the site to Puma Energy who now use the site as a storage facility rather than a refinery

In Pembroke, the ownership of the refinery has moved from Texaco to Chevron and is currently in the hands of Valero. The site has a capacity of 10.5 million tonnes per year, of which 90% of products produced are distributed by sea.

Sources:

Valero Energy Ltd – Pembroke Refinery

http://www.ukpia.com/industry_information/refining-and-uk-refineries/Valero-pembroke-refinery.aspx

LNG

Two large-scale facilities have been built on the northern shore of the Milford Haven waterway with a pipeline now linking the Haven to destinations in Swansea and Gloucestershire. The Liquefied Natural Gas importation and regassification plant at South

Hook is capable of supplying 20% of the UKs natural gas requirement. The smaller Dragon LNG plant at Waterston is able to meet 10% of demand which it imports from 19 different countries.

Sources:

South Hook LNG - http://www.southhooking.co.uk/
Dragon LNG - http://www.dragoning.co.uk/
Milford Haven port authority - http://www.mhpa.co.uk/ing.php

Implications

The LDP policies should be consistent with waste legislation, and ensure sustainable waste and mineral resource management. Planning can also manage the potential adverse effects associated with waste and minerals such as road traffic, odours, noise and health risks. The Plan should also contribute to the wider aims of promoting renewable energy. Planning can also promote energy efficiency in commercial building, homes and transport.

The SA objectives relate to the pollution of air, water, soil, noise, vibration, light. Also to resource efficiency which includes the efficient use of water and incorporating water conservation measures in new developments. Resources also include energy, minerals and aggregate, soils and all other resources. The use of secondary and recycled materials is encouraged. With regards to waste, this objective incorporates waste reduction, re-use, recycling and recovery. Alternatives to landfill such as composting facilities, and energy from waste should also be considered. The restoration and after-care of minerals and aggregate sites is also important. Sites can be an important resource for biodiversity and geology.

Baseline data (Part 3)

10. Water

Summary of baseline

Introduction

Directives are in force to improve water quality in Wales, including the Water Framework Directive, the Bathing Water Directive and the Nitrates Directive.

The Water Framework Directive (WFD) came into force in December 2000 and was incorporated into UK law in 2003. It introduced a consistent approach to water management. It applies to all surface freshwater bodies, including lakes, streams and rivers, together with groundwaters and associated ecosystems, estuaries and coastal waters out to one mile from low water. WFD takes a holistic approach to the water environment, integrating the consideration of water quality, water quantity, physical habitats and ecology. Monitoring of water quality in all water bodies under WFD started in 2007, superseding previous approaches.

The WFD seeks to reduce pollution, improve the condition of aquatic ecosystems, promote the sustainable use of water and reduce the effects of floods and droughts.

The WFD has been implemented in stages based on river basins, through River Basin Management Plans. There are three River Basin Districts in Wales, that covering Pembrokeshire being the one for Western Wales. The WFD classification system for water quality is based on five classes – high, good, moderate, poor and bad.

The general objective of the WFD was to achieve good status for all inland and coastal waters by 22nd December 2015, although there are some exceptions.

The Bathing Water Directive (BWD) came into force in 2015. It seeks to preserve, protect and improve the quality of the environment and to protect human health. It also aims to improve management practices at all bathing waters and to standardise information available to bathers across Europe. The BWD introduced a new classification system with stricter water quality standards. The bathing water classification has 4 classes – excellent, good, sufficient and poor. A minimum of sufficient was required for all bathing water bodies by the end of the 2015 bathing season.

There are associated Bathing Water Regulations, which were introduced in July 2013. From the 2016 bathing season, every local authority controlling a bathing water area had to display bathing water classifications provided by Natural Resources Wales (NRW). The Blue Flag Award scheme makes awards to beaches that achieve excellent water quality standard under the BWD.

The Nitrates Directive aims to reduce and prevent pollution of water by nitrates from agriculture. Member States are required to identify surface and groundwater bodies that are, or could be, high in nitrates from agricultural sources. Once such a water body has been identified, all land draining into that water body is designated as a Nitrate Vulnerable Zone (NVZ) and a code of good agricultural practice will be applied to that area. Water bodies in NVZs are monitored every 4 years for eutrophication and nitrate levels.

Non-designated beaches/water quality

Pembrokeshire has some of the best beaches in Britain. Many of these have been awarded Blue Flag, Green Coast and Seaside awards. Pembrokeshire's beaches also have exceptionally good water quality.

Welsh Government designates beaches in Wales according to their popularity / usage. Beaches that are designated as bathing waters are sampled and monitored by Natural Resources Wales. Non-designated beaches are sampled and monitored by Pembrokeshire County Council.

There are 29 locations in Pembrokeshire that are 'designated as bathing waters' and a further 13 that are in the 'non-designated beaches category' (increasing to 15 if Llanion and Pembroke Castle Pond are included because of their use as water sports venues).

Designated bathing waters are monitored and assessed for compliance with the revised Bathing Water Directive. In Wales, the stricter standards of the revised Bathing Water Directive of 2006 came into force in 2015.

Bathing waters are classified as 'excellent', 'good', 'sufficient' and 'poor'. 'Sufficient' water quality has been required for all bathing waters since 2015. The revised Bathing Water Directive also introduced stricter microbiological standards. The standards use two parameters: intestinal enterococci and Escherichia coli, and are based on 95- and 90- percentile values.

The designated bathing waters in Pembrokeshire are within the National Park. The classification at these locations is reported online by Natural Resources Wales. In 2017, 23 of these beaches were classified as excellent, 4 as good and 2 as sufficient.

Pembrokeshire County Council carries out monitoring of non-designated beaches in some cases and Natural Resources Wales does this in other cases. Pembrokeshire County Council samples the non-designated beaches at St. Brides, Gelliswick, Caldey, Martin's Haven, Cwm-yr-Eglwys, West Dale and Goodwick. Of these, Gelliswick and Goodwick are outside the National Park and therefore within the Council's planning jurisdiction. However, the results of sampling are not published.

River quality assessment

The Water Framework Directive of 2000 introduced a holistic approach to the management of water quality and established a system for the protection and improvement of all water bodies, including rivers, estuaries, groundwater, lakes and coastal waters. It complements the provisions of the revised Bathing Waters Directive.

The Water Framework Directive (WFD) introduced a new concept of "good status" that is far more rigorous than previous water environment quality measures. It estimated that 95% of water bodies are at risk of failing to reach the 'good status' category.

The River Basin Management Plans (RBMPs) required by the Directive are important strategies that will influence and be influenced by Development Plans. The first RBMPs in Wales were published by December 2009 and the next iteration are now in place. Further revisions are expected by 2021.

The Western Wales River Basin District is contained and managed wholly within Wales. Natural Resources Wales published the Western Wales River Basin Management Plan on 22/12/15. The purpose of this River Basin Management Plan is to protect and improve the water environment for the wider benefit of people and wildlife. Flood Risk Management Plans have been produced to sit alongside the River Basin Management Plans.

The River Basin District has been divided into nine management catchments, with that for the Cleddau and Pembrokeshire Coastal Rivers covering much of Pembrokeshire. However, there are also parts of the County within the Teifi and North Ceredigion catchment and the Carmarthen Bay and Gower catchment.

For information, previous reporting for LDP Sustainability Appraisal purposes relied on assessments by the Environment Agency using a General Quality Assessment (GQA) procedure, with information on chemical and biological quality of rivers supplied by DEFRA. However, this approach has now been superseded in Wales.

Within the <u>Cleddau and Pembrokeshire Coastal Rivers catchment</u>, the numbers and types of water bodies are as set out below:

Table 85

| | Natural | Artificial | Heavily Modified | Total |
|-------------|---------|------------|---------------------|-------|
| River* | 43 | 0 | 2 | 45 |
| Lake | 3 | 0 | 2 | 5 |
| Coastal | 5 | 0 | 0 | 5 |
| Estuarine | 4 | 0 | 0 | 4 |
| Groundwater | 2 | 0 | 0 | 2 |
| Total | 57 | 0 | 4 | 61 |

^{*} River water bodies include canals and surface water transfers

Source: Cleddau and Pembrokeshire Coastal Rivers Management Catchment Summary, 2015

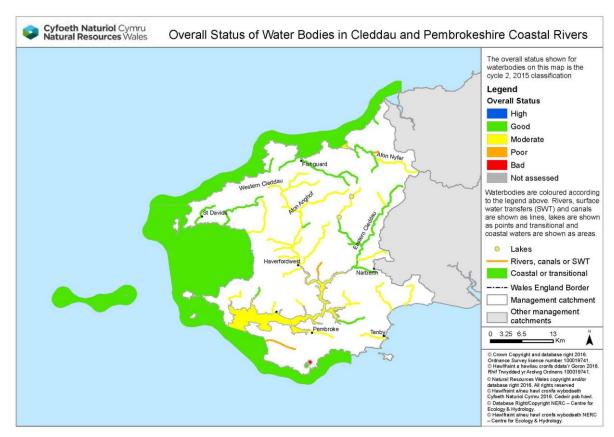
Also within the Cleddau and Pembrokeshire Coastal Rivers catchment, the number and type of protected area are as set out below: Table 86

| Protected Area | Number or area |
|---|----------------|
| Bathing Waters | 19 |
| Drinking Water Protected Areas | 11 |
| Natura 2000 and Ramsar Sites | 14 |
| Nitrate Vulnerable Zones | 1560 ha |
| Shellfish Waters | 1 |
| Urban Waste Water Treatment Directive – Sensitive Areas | 0 |

Source: Cleddau and Pembrokeshire Coastal Rivers Management Catchment Summary, 2015 https://naturalresources.wales/media/3207/cleddau-and-pembrokeshire-coastal-rivers-management-catchment.pdf

Natural Resources Wales has assessed the condition of water bodies through monitoring. The results are shown in Figure 8 of the Cleddau and Pembrokeshire Coastal Rivers Management Catchment Summary, 2015, which is reproduced below (from the report available on the NRW website):

Figure 8



Source: https://naturalresources.wales/media/3207/cleddau-and-pembrokeshire-coastal-rivers-management-catchment.pdf

In summary, 42% of surface water bodies are of good overall classification status, 51% of moderate status, 5% of poor status and 2% of bad status.

The report also records that Milford Haven water bodies are sensitive to nutrient pollution and that data was available that demonstrated that Milford Haven Inner water body met the criteria for designation under the provisions of the Nitrates Directive.

To elaborate, as the map above shows, Milford Haven Waterway and the Daugleddau is of moderate status only for water quality because of the high nutrient levels. Hence, NRW is working with the agricultural community to implement measures to reduce this problem. However, because there are ongoing problems here and elsewhere in Wales, Welsh Government has consulted on proposals to extend coverage of Nitrate Vulnerable Zones (NVZs) in Wales.

NRW's investigations have identified six water bodies in the catchment that are failing because of agriculture and rural land management. These include the Nevern, the Western Cleddau and the Syfynwy Rivers, with a further 11 rivers deemed likely to be failing. Additionally artificial barriers that prevent fish from migrating and reaching their spawning grounds are a reason for failure in three rivers – Westfield Pill, Pembroke River and Cartlett Brook. There are also problems on some rivers because of discharges from wastewater treatment works.

On the 13th December 2017, the Cabinet Secretary for Energy, Planning and Rural Affairs indicated that she is minded to introduce a whole-Wales approach to tackling nitrate pollution from agriculture, to improve water quality. This statement followed a consultation and the intention is now to develop 'the right balance of comprehensive regulatory measures, voluntary measures and investment'.

The Ministerial Statement indicates that agricultural use of nitrates, while vital to help plants and crops to grow, is a major source of water pollution. It adds that 'poor nutrient management is still a major problem across Wales' and that 'pollution of this kind is entirely preventable'.

The <u>Teifi and North Ceredigion catchment</u> extends into the north-eastern part of Pembrokeshire, although much of this catchment lies beyond Pembrokeshire. The number and type of water bodies in this management catchment are set out below:

Table 87

| | Natural | Artificial | Heavily Modified | Total |
|--------|---------|------------|---------------------|-------|
| River* | 60 | 0 | 2 | 62 |
| Lake | 5 | 0 | 2 | 7 |

| Coastal | 1 | 0 | 0 | 1 |
|-------------|----|---|---|----|
| Estuarine | 1 | 0 | 1 | 2 |
| Groundwater | 2 | 0 | 0 | 2 |
| Total | 69 | 0 | 5 | 74 |

^{*} River water bodies include canals and surface water transfers

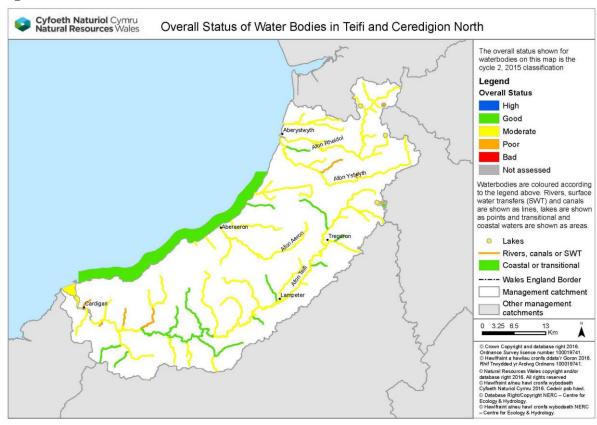
Source: Teifi and North Ceredigion Management Catchment Summary, 2015.

Also within the Teifi and North Ceredigion Catchment, the number and type of protected area are as set out below: Table 88

| Protected Area | Number or area |
|---|----------------|
| Bathing Waters | 12 |
| Drinking Water Protected Areas | 8 |
| Natura 2000 and Ramsar Sites | 10 |
| Nitrate Vulnerable Zones | 0 ha |
| Shellfish Waters | 0 |
| Urban Waste Water Treatment Directive – Sensitive Areas | 0 |

Natural Resources Wales has assessed the condition of water bodies through monitoring. The results are shown in Figure 9 of the Teifi and North Ceredigion Management Catchment Summary, 2015, which is reproduced below (from the report available on the NRW website):

Figure 9



Source: Teifi and North Ceredigion Management Catchment Summary, 2015 https://naturalresources.wales/media/3215/teifi-and-north-ceredigion-management-catchment.pdf

In summary, 22% of surface water bodies are of good overall classification status, 67% of moderate status and 11% of poor status.

In this catchment, 16 river water bodies are failing because of abandoned metal mines, with another 10 likely to be failing for the same reason. Agriculture and rual land management are the reason for a failure of a further 10 water bodies and are likely to be

the reason for a further 12 water bodies failing. Artificial barriers preventing fish from migrating and reaching their spawning grounds account for a further two failures, with three further failures likely for this reason. Acidification from air pollution is a further failure reason in several instances. Four water bodies failed because of discharges from waste water treatment works. Unsewered domestic waste water (septic tanks) are a problem for four river water bodies. Finally, in one case surface water abstraction for a hydro-power scheme is a confirmed reason for failure.

The <u>Carmarthen Bay and Gower catchment</u> extends into the easternmost parts of Pembrokeshire, although much of this catchment lies beyond Pembrokeshire. The number and type of water bodies in this management catchment are set out below:

Table 89

| | Natural | Artificial | Heavily | Total |
|-------------|---------|------------|----------|-------|
| | | | Modified | |
| River* | 90 | 0 | 5 | 95 |
| Lake | 0 | 0 | 5 | 5 |
| Coastal | 2 | 0 | 0 | 2 |
| Estuarine | 4 | 0 | 0 | 4 |
| Groundwater | 4 | 0 | 0 | 4 |
| Total | 98 | 0 | 10 | 108 |

^{*} River water bodies include canals and surface water transfers

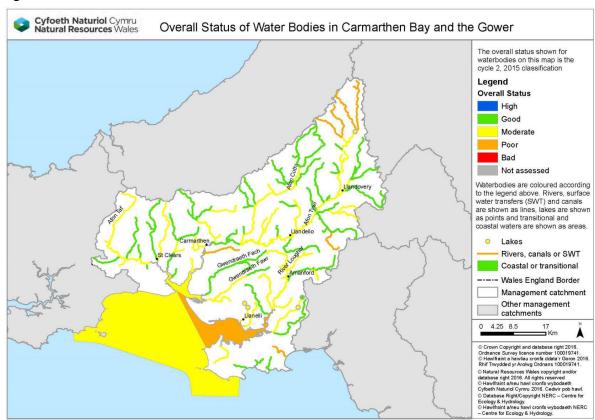
Source: Carmarthen Bay and Gower Management Catchment Summary, 2015. https://naturalresources.wales/media/679444/carmarthen-bay-and-gower-management-catchment.pdf

Also within the Carmarthen Bay and Gower Catchment, the number and type of protected area are as set out below: Table 90

| Protected Area | Number or area |
|---|----------------|
| Bathing Waters | 13 |
| Drinking Water Protected Areas | 9 |
| Natura 2000 and Ramsar Sites | 13 |
| Nitrate Vulnerable Zones | 0 ha |
| Shellfish Waters | 5 |
| Urban Waste Water Treatment Directive – Sensitive Areas | 2 |

Natural Resources Wales has assessed the condition of water bodies through monitoring. The results are shown in Figure 10 of the Carmarthen Bay and Gower Management Catchment Summary, 2015, which is reproduced below (from the report available on the NRW website):

Figure 10



Source: Carmarthen Bay and Gower Management Catchment Summary, 2015. https://naturalresources.wales/media/679444/carmarthen-bay-and-gower-management-catchment.pdf

In summary, 48% of surface water bodies are of good overall classification status, 43% of moderate status and 9% of poor status.

NRW advises that initial investigations indicate that most water bodies in this management catchment are failing in part due to the effects of agriculture and rural land management practices. There are also problems relating to artificial barriers that prevent fish migrating and reaching their spawning grounds, from abandoned mines and from waste water treatment works discharges in certain areas. Physical modifications put in place for flood protection purposes have caused failure in one case.

Drinking Water Quality

Most water supplies in Pembrokeshire are provided by a statutory water undertaker or a licensed water supplier, for instance through the water company Dwr Cymru Welsh Water. Drinking Water Protected Areas are in place in a variety of locations across the County, including some important groundwater aquifers.

However, some commercial and domestic water supplies in Pembrokeshire come from private supplies, as set out below:

- Domestic premises with private water supplies 839
- Commercial premises with private water supplies 170

Source: Pembrokeshire County Council website, 2018 https://www.pembrokeshire.gov.uk/pollution-control/private-water-supplies

Water Quantity

Natural Resources Wales published the Cleddau and Pembrokeshire Coastal Rivers Catchment Abstraction Licensing Strategy in May 2014. It supersedes an earlier strategy that was issued in December 2006. The May 2014 strategy sets out how NRW will manage water resources within this catchment and includes information about managing existing abstraction licenses and water availability for further abstraction. Much of the information in this part of the paper is derived from this document.

This licensing strategy covers most of Pembrokeshire, but does not include the Teifi Catchment in the north-easternmost part of the County, nor some of the rural areas of the County to the east of Narberth, which drain into the Taf and thence to Carmarthen Bay.

Population growth and climate change predictions make it likely that pressure on water resources will increase in the future. Natural Resources Wales seeks to 'maintain and improve sustainable abstraction, balancing the needs of society, the economy and the environment'.

There is a related Cleddau and Pembrokeshire Coastal Rivers Catchment Abstraction Management Strategy (CAMS), which is now a live assessment, subject to continuous update, rather than being formally reviewed on a 6-year cycle, as previously happened.

The Water Framework Directive seeks to protect and enhance the water environment and ensure sustainable use of water resources for economic and social development.

CAMS explains how NRW will manage the water resources of a catchment and contribute to implementing the requirements of the Water Framework Directive.

CAMS provides the following:

- A water resource assessment of rivers, lakes, reservoirs, estuaries and groundwater, collectively known as water bodies;
- Identification of water bodies that fail flow conditions expected to support good ecological status;
- Prevention of deterioration of water body status due to new abstractions; and
- Information to support River Basin Management Plans.

Abstraction licenses are needed if the intention is to abstract more than 20 cubic metres (4,400 gallons) of water per day from a river or stream, a reservoir, lake or pond, a canal, a spring or an underground source.

In terms of detail, the river catchments covered by the Cleddau and Pembrokeshire Coastal Rivers CAMS area are the Eastern and Western Cleddau and the coastal river catchments of the Nevern, Gwaun, Alun, Solva, Ritec, Cresswell, Castlemartin Corse, Westfield Pill and Gann Flats Stream. These are surface water dominated catchments with rapid changes in flows soon after rainfall events.

Intensive agricultural practices have led to significant bankside erosion and habitat destruction, although schemes are now in place to restore riverside habitat, in particular on the Western Cleddau. Generally, the area has high conservation and landscape value, with various SACs and SSSIs designated (there are also SPAs along the coast). There are important fisheries and conservation interests within this CAMS area.

There are 239 licensed abstractions within this CAMS area, all of which are from surface waters. Abstractions from groundwater sources over a large part of south west Wales, including this CAMS area, are currently exempt from licensing by Statutory Instrument, although it is expected that the groundwater exemption will in time be removed under the Water Act 2003. However, as things currently stand, the whole of this CAMS area is exempt for groundwater licensing, as shown by Map 5 of the Cleddau and Pembrokeshire Coastal Rivers Catchment Abstraction Licensing Strategy in May 2014.

The majority of licensed abstractions are for agricultural purposes, such as spray irrigation. This accounts for 90% of licenses, but only 0.12% of licensed water. Fish farming is also a significant user of abstracted water.

Abstraction for public water supply is the main consumptive use within this CAMS area, but accounts for only 3% of the water licensed. Most of the water for public supply in this CAMS area comes from the Eastern and Western Cleddau rivers and their tributaries. The water company Dwr Cymru Welsh Water uses water from these sources to supply most of Pembrokeshire with its domestic water supply. This water company also supplies some major industrial users.

Llys-y-Fran reservoir, on the Afon Syfynwy (a tributary of the Eastern Cleddau) is used to regulate flows in the Eastern Cleddau. This allows abstraction further downstream which provides a public water supply. Water may also be abstracted directly from the reservoir for public water supply.

About two-thirds of licenses in this CAMS area are outside the river catchments in the CAMS resource assessment. Many are on small coastal streams and the Milford Haven Waterway. These are mostly for spray irrigation or for supplying winter storage reservoirs and do not have an impact on low river flows in the summer months.

Pembroke Power Station abstracts from the Milford Haven Waterway and holds the license for the largest non-consumptive abstraction in this CAMS area. It accounts for more than 90% of the total licensed resource.

There are seven known large exempt abstractions within this CAMS area. These are from ground waters for public water supply and private water supplies and have been included in the resource assessment. Groundwater supports many small domestic and agricultural abstractions, but the cumulative quantities are insignificant.

Abstraction management is based on resource assessment. NRW has mapped water resource availability within this catchment. It uses the following classification system for surface water resources:

- High hydrological status
- Water available for licensing
- Restricted water available for licensing
- Water not available for licensing
- Heavily Modified Water Bodies

There are no water bodies of high hydrological status in this catchment.

For groundwater, a similar approach is taken:

- Water available for licensing
- Restricted water available for licensing
- Water not available for licensing

NRW advises that those applying for a license to abstract should consider that not all resources are 100% reliable. Reliability has been mapped by NRW.

NRW also sets out detailed information on how it manages abstractions in this CAMS area, details of which are set out in section 4 of the Cleddau and Pembrokeshire Coastal Rivers Catchment Abstraction Licensing Strategy in May 2014. It is worth noting that estuaries are not included in the CAMS resource assessment, as tidal influences cannot be assessed in the same manner as the inland waters.

Section 4 also explains that there are four groundwater management units in this CAMS area, at Bosherston, Park Springs, Milton and Pendine.

Teifi catchment within Pembrokeshire

A small part of Pembrokeshire is within the Teifi catchment. Agriculture is the main land use in this rural area. Dairy farms dominate the land in the lower, more fertile reaches of the catchments, particularly the Teifi, with mixed dairy and livestock rearing in the middle reaches and livestock rearing in the upper catchments. Forestry covers approximately 20% of the area.

Water is classified as 'available' in the area in Pembrokeshire. The plan also reflects the needs of the Teifi River Special Area of Conservation, and this is shown in appropriate restrictions on abstractions. All abstractions in the relevant areas are assessed under the Habitats Directive, with appropriate limits attributed to those abstractions.

Carmarthen Bay catchment within Pembrokeshire

A small part of Pembrokeshire is within the Taf catchment. The CAMS area is predominantly rural with some areas of urban and industrial development. The developed areas are concentrated around Carmarthen and Llanelli and adjacent to the river in the Amman Valley. There is large-scale metal industry associated with the Swansea and Llanelli areas, although only the latter is within this CAMS area.

Agriculture dominates the land use in this area and plays an important role in the local economy in the form of dairy, beef and sheep farming. Forestry accounts for a large percentage of the land use in the upper reaches of the Tywi catchment and on a few of the tributaries.

Water is classified as 'available' in the area in Pembrokeshire. All abstractions where relevant are assessed under the Habitats Directive, with appropriate limits attributed to those abstractions.

Sources:

NRW, Cleddau Rivers and Pembrokeshire Coastal Rivers Abstraction Licensing Strategy, 2014 https://cdn.naturalresources.wales/media/681624/cleddau-pembs_strategy_english.pdf?mode=pad&rnd=131596369470000000

NRW, Teifi and North Ceredigion Abstraction Licensing Strategy, 2014 https://cdn.naturalresources.wales/media/681623/teifi-north-ceredigion_strategy_english.pdf?mode=pad&rnd=131596369470000000

NRW, Carmarthen Bay Abstraction Licensing Strategy, 2014 https://cdn.naturalresources.wales/media/681625/carmarthen-bay_strategy_english.pdf?mode=pad&rnd=131596369480000000

Water quantity issues, constraints and gaps

There are perceived to be issues with water abstraction licensing in the Western and Eastern Cleddau (Cleddau CAMS). There is also a lack of information from DCWW data on water resources and sewerage capacity.

Source Protection Zones

Source Protection Zones (SPZs) defined by the then Environment Agency, now Natural Resources Wales, for groundwater sources such as wells, boreholes and springs used for public drinking water supply. These zones show the risk of contamination from any activities that might cause pollution in the area. The closer the activity, the greater the risk. There are 6 zones in Pembrokeshire, or on the border of the PCNPA or Carmarthenshire/Ceredigion.

In relation to private water supplies, all groundwater abstractions intended for human consumption or food production purposes have a default SPZ1 with a minimum radius of 50 metres. In some cases depending on the volumes abstracted, a default SPZ2 with a minimum radius of 250 metres applies.

This also applies to:

- public drinking water supplies
- other commercial potable supplies (including mineral and bottled-water)
- groundwater abstractions used in commercial food and drink production*
- other sources where additional protection is required

Source: The Environment Agency's Approach to Groundwater, 2018 (the approach taken by NRW

https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/advice-for-developers/protecting-groundwater/?lang=en)

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/692989/Envirnment-Agency-approach-to-groundwater-protection.pdf

Lle Maps, http://lle.gov.wales/map#b=europa&l=289;&m=-4.87865,51.92371,10

Water availability

The majority of Pembrokeshire is fed from Bolton Hill Water Treatment Works located to the West side of Haverfordwest. This works is a strategic asset for Dŵr Cymru Welsh Water (DCWW) in delivering potable water to customers, commercial, health and education premises. DCWW are developing a 25 year water resource plan to meet projected future demands for the County. Based on the future demands already shared with us we do not foresee any problems at present in meeting the anticipated domestic demands during the life of the Local Development Plan. Over the next few years, DCWW will be investing over £21.4 million in Pembrokeshire (and Ceredigion) (Dwr Cymru Welsh Water, https://dwrcymru.com/en/My-Water/Water-Quality-Investment-Work/Pembrokeshire.aspx).

^{*} This does not relate to groundwater that is used solely for the irrigation of crops.

Groundwater

Aquifers

Limestone aquifers in the south of the County (See PCC, JUDP): Carew - Milton spring source aquifer - limestone Minor aquifer near Johnston Old Hakin Road, Merlin's Bridge area – minor groundwater aquifer Slade Lane, Haverfordwest – major aquifer groundwater aquifer

Flooding

Flood risk maps are available on the Natural Resources Wales website: http://naturalresources.wales/flooding/managing-flood-risk/flood-risk-maps-for-river-basin-districts/?lang=en

The Welsh Government TAN 15 (Development and Flood Risk) defines areas where risk of flooding should be considered in planning matters. TAN 15 zone B identifies areas known to have flooded in the past due to the presence of sedimentary deposits, zone C2 identifies areas at 0.1% or greater risk of flooding, without significant flood defence structures (there are no C1 areas (at risk of flooding, served by flood defences)

Table 91: Number of properties at risk of flooding, StatsWales, 2014

| | Risk | | | | | |
|---------------|--------|--------|------------------|---------|-------------|---------|
| | High | Medium | Medium + high | Low | Very low | Total |
| Pembrokeshire | 526 | 338 | 863 | 1,513 | 1 | 2,377 |
| Wales | 21,624 | 39,474 | 61,098 | 146,103 | 1,333 | 208,534 |

From StatsWales

https://statswales.gov.wales/Catalogue/Environment-and-Countryside/Flooding/environment-and-countryside-state-of-the-environment-properties-at-risk-of-flooding

Western Wales Flood Risk Management Plan, NRW https://naturalresources.wales/media/675146/final_frmp_-western-wales_pk26b82.pdf

Development Advice Maps are available on the Natural Resources Wales website and should be used in conjunction with Planning Policy Wales and Technical Advice Note 15: Development and Flood Risk.

https://maps.cyfoethnaturiolcymru.gov.uk/Html5Viewer/Index.html?configBase=https://maps.cyfoethnaturiolcymru.gov.uk/Geocortex/Essentials/REST/sites/Flood Risk/viewers/Flood Risk/virtualdirectory/Resources/Config/Default&layerTheme=2

Information on flooding in the county is also available on the Pembrokeshire County Council website:

Preliminary Flood Risk Report, PCC, 2011 <a href="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3944&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3944&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3944&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3944&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3944&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3944&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3944&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3944&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3944&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3944&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3944&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3944&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3944&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3944&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3944&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3944&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3944&language="https://www.pembrokeshire.gov.uk/objview.asp.gov.uk/objvie

Addendum to update the original Preliminary Flood Risk Assessment, 2017 <a href="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp?object_id=3945&language="https://www.pembrokeshire.gov.uk/objview.asp."https://www.pembrokeshire.gov.uk/objview.asp.

Flooding issues, constraints and gaps

Climate change is the biggest issue with regards to flooding in the County. The ability of flood defences to cope with increased storminess, increased surface water run-off from urban and rural areas.

Implications

The LDP should take account of water resources, ensure good water quality of any bathing waters and freshwaters, and comply with any legislation and environmental standards relating to the water environment. Planning can also seek to address those impacts from diffuse pollution. The LDP should have regard for flood risk and the possible increased risk as a result of climate change. The plan should also promote sustainable drainage systems.

The SA objectives require that water quality objectives are achieved and quality is improved further. This includes water for biodiversity and human uses. The effects of land-use on water resources should also be minimised. The topic of flooding (fluvial, tidal and surface water) and sea level rises also overlaps with the climatic factors objectives (see previous sections).

11. Soil and land Contaminated land

Land contamination is usually the result of previous land usage(s) or may, in rare cases, be due to contaminants being present due to natural geological conditions. In certain circumstances land with a historical industrial usage has been known to pollute controlled waters, release potentially toxic or explosive gases, damage buildings and affect human health by the ingestion of or exposure to contaminated food / soil.

The words 'Contaminated Land' now have a specific legal definition. Under Section 78A (2) of Part 2A Environmental Protection Act 1990 (EPA) 'Contaminated Land' is defined as;

"Land which appears to the Local Authority to be in such a condition, by reason of substances in, on, or under the land, that significant harm is being caused, or there is a significant possibility of such harm being caused; or significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution being caused."

"Harm" means harm to the health of living organisms or other interference with the ecological systems of which they form part and, in the case of man, includes harm to his property. Whilst Pembrokeshire does have areas of land affected by contamination, no sites within Pembrokeshire have been formally determined yet as Contaminated Land in accordance with the new definition.

Pembrokeshire County Council has a revised Contaminated Land Inspection Strategy (2016). Major site investigations have taken place at Waterloo Industrial Estate, South Pembrokeshire Golf Club, Meads, Narberth Town Moor, Golden Lane and Goodwick Moor. The majority of the works previously have been funded by the Welsh Governments Contaminated Land Capital Fund. However, this was withdrawn in 2010/11 and as such any further investigations have been funded by Pembrokeshire County Council, although this has been limited. Privately owned sites will be dealt with on a voluntary basis.

Comparators, targets and trend

There is limited information available on national contaminated land as assessment of contaminated land in Wales is varied.

Source: https://www.pembrokeshire.gov.uk/contaminated-land/how-is-pembrokeshire-county-council-tackling-land-contamination

Subsidence

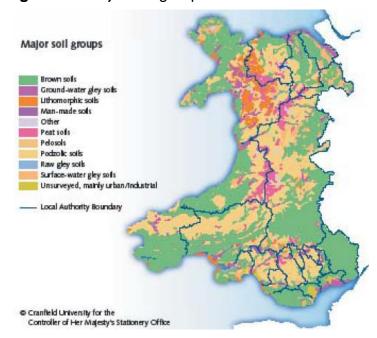
There has been some subsidence associated with historical coal mining in the County.

Soil

There is comparatively little information about soils in Pembrokeshire. Information is available on soil grade, however this is a measure of the soils suitability for intensive agriculture rather than other attributes such as ability to store water or carbon store. Soils in lower lying areas of Pembrokeshire are generally classified as Grade 3 (Grade 1 is classified as being the most suitable). Higher land, particularly in the north of the County, as well as land overlying the coal measures tend to be Grade 4.

Across Wales there is a high incidence of sensitive habitats exceeding critical loads in relation to acidification (acid deposition) and eutrophication (nutrient enrichment). Soils are an important carbon sink and therefore soil conservation can contribute towards building resilience to climate change. The maps below illustrate general soil types and agricultural land classifications.

Figure 11: Major soil groups

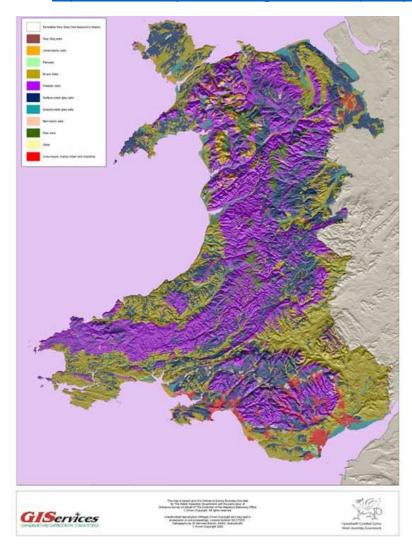


Source: WAG 2005d, Our Environment, Our Future, Your Views, the Consultation on the Environment Strategy for Wales, 2005, also WSP

Soilscapes Maps are available via Cranfield Soil and Agrifood Institute:

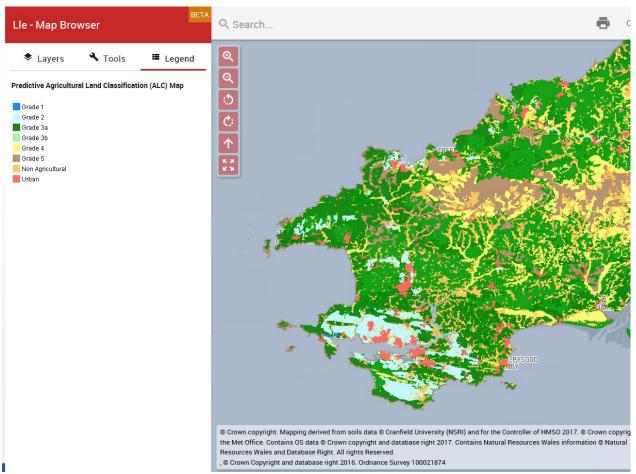
http://www.landis.org.uk/soilscapes/
Figure 12: National soil map and relief for Wales

Source: http://www.countryside.wales.gov.uk/fe maps/maps preview.asp?image id=9



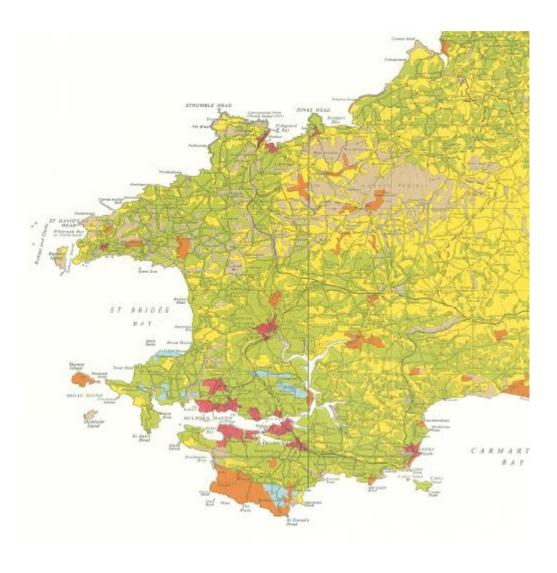
Soil maps are available at:

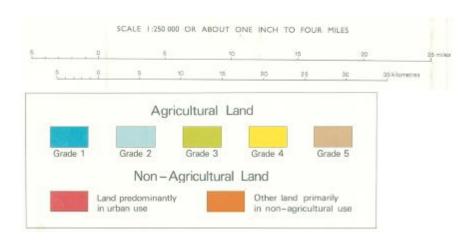
LandIS http://www.landis.org.uk/data/natmap.cfm



Source: http://lle.gov.wales/map#b=europa&l=906;&m=-4.88459,51.87555,10

Figure 13: Agricultural Land Classification





Source: Defra

There is approximately 76.42% agricultural land in Wales.

The current agri-environment scheme is Glastir (previously Tir Gofal, and Environmentally Sensitive Areas).

Soil processes

Environmental services such as retaining and releasing clean water in river catchments, buffering, filtering and transforming and storing contaminants are provided by soil. Soils are also a store for carbon (Figure 14) with Welsh soils storing 16 times more carbon than the atmosphere above Wales (Welsh Soils Action Plan, 2008), soil is also important for biodiversity. The Environment (Wales) Act 2016 sets out the approach to help Wales to reduce its carbon emissions. This will be set in regulations by the end of 2018 (WG, 2018). Welsh soils store 410 million tonnes of carbon, as well as being the basis for all agriculture (State of Natural Resources Report, SoNaRR, 2017).

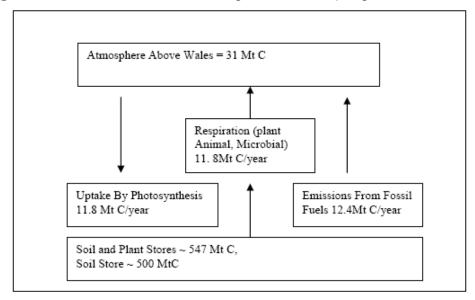


Figure 14: Provisional Carbon Budget for Wales (Megatonnes Carbon - MtC)

Source: Welsh Soils Action Plan (2008)

Source: https://cdn.naturalresources.wales/media/684107/chapter-1-introduction-to-sonarr-final-for-publication.pdf

Soil and agricultural land issues

There is a general lack of current state and trends in soils in Wales, including soil quality; issues such as acidification, soil erosion and the extent of soil carbon stores and the vulnerability and resilience of soils to land use, land management and changing weather patterns and climate.

Radon

The natural radioactive gas radon comes from the small amounts of uranium which occur naturally in all rocks and soils. The geology of Pembrokeshire means that there are higher levels of radon than in other parts of the country and is designated as a radon affected area. Radon has been found to cause lung cancer and therefore any new development will need to ensure mitigation against radon.

Maps are available online at:

http://www.ukradon.org/information/ukmaps

Information at Public Health Wales: http://www.wales.nhs.uk/sitesplus/888/page/81979

Implications/Issues

The LDP should seek to protect soil quality and quantity from erosion and contamination during development. The plan should also seek to regenerate contaminated land, development on brownfield land, and ensure land is protected from contamination.

The SA objectives for land and soil incorporate:

- The re-use of derelict and previously developed land (and buildings)
- · Remediating contaminated land
- Minimising soil erosion and pollution to soils
- · Loss of agricultural land
- · Promoting sustainable agriculture.

12. Biodiversity, fauna and flora

Summary of baseline

Pembrokeshire (excluding the area of National Park Designation) has entirely or in part, 13 European sites designated for habitats and species (SACs, and Candidate SACs (Sites of Community Importance and SPAs), and over 30 Sites of Special Scientific Interest), plus other areas

There are parts of land based Special Areas of Conservation (SACs) within the area excluding the Pembrokeshire Coast National Park Authority. There are parts of three marine based SACs including part of the Pembrokeshire Marine SAC, part of the Cardigan Bay SAC and a small part of Carmarthen Bay and Estuaries SAC, there are now two Sites of Community Importance (SCI) for harbour porpoise. There is also part of one Special Protection Area (SPA) designated under the EU Birds Directive within a small coastal area of the County (Carmarthen Bay SPA). The County also has all or parts of over 30 Sites of Special Scientific Interest (SSSI). There are also National Nature Reserves (NNRs) and one Local Nature Reserve (LNR). There are many linear sites which provide essential 'corridors' or ecological connectivity for biodiversity. This area includes land based SACs, SSSIs, NNRs and LNRs.

European sites (Natura 2000 sites)

The table below summarises the designated features, condition and vulnerabilities. There is usually a 6 year reporting cycle for the condition of SACs and SPAs, and the last report was due in 2012. Indicative site level feature condition assessments has been made for the European marine sites in Wales in 2017/2018.

There are a couple of new sites – West Wales Marine Candidate SAC (harbour porpoise) and Bristol Channel Approaches Candidate SAC (harbour porpoise). Now described as SCIs Sites of Community Importance http://jncc.defra.gov.uk/ProtectedSites/SACselection/SAC_list.asp?Country=W

Condition assessments are not available for these sites. More recent terrestrial site condition assessments are not available.

SACs

Table 92

*Marine site assessments based on indicative site level feature condition undertaken 2017, others based on previous assessment.

| SAC and SAC Features | Condition: Trend* | Vulnerabilities/potential threats | |
|---|------------------------|---|--|
| Bristol Channel Approaches (Part) UK0030396 (| Site of Community Impo | rtance) | |
| 1351 Harbour porpoise | Not yet available | | |
| West Wales Marine (Part) UK0030397 (Site of Co | ommunity Importance) | | |
| 1351 Harbour Porpoise | Not yet available | | |
| *Carmarthen Bay and Estuaries (Part) UK002002 | 20 | | |
| 1110 Sandbanks which are slightly covered by sea water all the time | Unfavourable | Over-grazing (including deer browsing); Flood defence or | |
| 1130 Estuaries | Unfavourable | Coastal defence works, potential threats from fisheries and shellfish management, aggregate dredging, water | |
| 1140 Mudflats and sandflats not covered by seawater at low tide | Unfavourable | | |
| 1160 Large shallow inlets and bays | Unfavourable | quality (diffuse and point source water pollution). | |
| 1310 Salicornia and other annuals colonising mud and sand | Favourable | | |
| 1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) | Unfavourable | | |
| 1103 Twaite shad Alosa fallax | Unfavourable | | |
| 1095 Sea lamprey Petromyzon marinus | Unfavourable | | |
| 1099 River lamprey Lampetra fluviatilis | Unfavourable | | |
| 1102 Allis shad <i>Alosa alosa</i> | Unfavourable | | |
| 1355 Otter Lutra lutra | Favourable | | |
| *Cardigan Bay (Part) UK0012712 | | | |

| 1110 Sandbanks which are slightly covered by sea water all the time | Unfavourable | Bottlenose dolphin, porpoise and seals are vulnerable to | |
|---|--------------|---|--|
| 1170 Reefs | Favourable | disturbance from seismic surveys and sea based | |
| 8330 Submerged or partially submerged sea caves | Unknown | recreation. Environmental contaminants such as mercury | |
| 1349 Bottlenose dolphin Tursiops truncatus | Favourable | and PCBs in dolphin prey. Entanglement of marine | |
| 1095 Sea lamprey Petromyzon marinus | Unknown | mammals in fishing nets. Fisheries, damage to seabed | |
| 1099 River lamprey Lampetra fluviatilis | Favourable | habitats. Marine litter, military | |
| 1364 Grey seal Halichoerus grypus | Favourable | testing or ordnance. Harbour dredging projects. | |
| *Pembrokeshire Marine (Part) UK0013116 | | | |
| 1130 Estuaries | Unfavourable | Water quality issues (point and | |
| 1160 Large shallow inlets and bays | Unfavourable | diffuse source pollution, sediment pollution), marine | |
| 1170 Reefs | Unfavourable | communities vulnerable to | |
| 1110 Sandbanks which are slightly covered by sea water all the time | Unfavourable | damage from certain fishing methods (bait digging). Pollution from transport or exploration/ production of oil and gas. Coastal infrastructure, invasive | |
| 1140 Mudflats and sandflats not covered by seawater at low tide | Unfavourable | | |
| 1150 Coastal lagoons | Unfavourable | species. | |
| 1330 Atlantic salt meadows (<i>Glauco-</i> Puccinellietalia maritimae) | Unfavourable | | |
| 8330 Submerged or partially submerged sea caves | Unknown | | |
| 1364 Grey seal Halichoerus grypus | Favourable | | |
| 1441 Shore dock Rumex rupestris | Favourable | | |
| 1095 Sea lamprey Petromyzon marinus | Unfavourable | | |
| 1099 River lamprey Lampetra fluviatilis | Unfavourable | | |

| 1102 Allis shad <i>Alosa alosa</i> | Favourable | | | |
|---|---------------------------------|---|--|--|
| 1103 Twaite shad <i>Alosa fallax</i> | Favourable | | | |
| 1355 Otter Lutra lutra | Favourable | | | |
| North West Pembrokeshire Commons (part on I | boundary) UK0030229 | | | |
| 4030 European dry heaths | Unfavourable: Recovering | Under-grazing; invasive species. | | |
| 7140 Transition mires and quaking bogs | Unfavourable: Un- classified | | | |
| 4010 Northern Atlantic wet heaths with <i>Erica</i> tetralix | Unfavourable: Recovering | | | |
| 1831 Floating water-plantain <i>Luronium</i> natans | Unfavourable: Un- classified | | | |
| North Pembrokeshire Woodlands (part) UK0030227 | | | | |
| 91A0 Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles | Unfavourable: Declining | Decline in traditional woodland management, forestry, | | |
| 91E0 Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) | Favourable: Maintained | fragmentation by coniferous afforestation. | | |
| 1308 Barbastelle Barbastella barbastellus | Favourable: Un- classified | | | |
| Pembrokeshire Bat Sites and Bosherston Lakes (Orielton) UK0014793 | | | | |
| 3140 Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara spp</i> . | Unfavourable: Un- classified | Water quality (including silt, water pollution (direct or diffuse), | | |
| 1304 Greater horseshoe bat Rhinolophus ferrumequinum | Favourable: Un- classified | run-off, nutrient enrichment, eutrophication etc), water quantity (drought). Physical deterioration of roost buildings. Habitat loss and disturbance in key feeding areas. Otter population vulnerable to water quality, human disturbance, | | |
| 1303 Lesser horseshoe bat Rhinolophus hipposideros | Favourable: Un- classified | | | |
| 1355 Otter Lutra lutra | Unfavourable: Un- classified | | | |

| | | entanglement in fishing gear and habitat loss. | |
|---|---------------------------------|---|--|
| Preseli (part on boundary) UK0012598 | I | | |
| 4010 Northern Atlantic wet heaths with <i>Erica</i> tetralix | Unfavourable: Un- classified | Under-grazing, acidification. | |
| 4030 European dry heaths | Unfavourable: Un- classified | | |
| 7150 Depressions on peat substrates of the Rhynchosporion | Favourable: Maintained | | |
| 7230 Alkaline fens | Favourable: Un- classified | | |
| 1044 Southern damselfly Coenagrion mercuriale | Favourable: Maintained | | |
| 1065 Marsh fritillary butterfly Euphydryas (Eurodryas, Hypodryas) aurinia | Unfavourable: Un- classified | | |
| 1393 Slender green feather- moss <i>Drepanocladus (Hamatocaulis)</i> vernicosus | Favourable: Maintained | | |
| Afon Teifi (Part) UK0012670 | | | |
| 3260 Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and Callitricho-Batrachion vegetation | Favourable: Maintained | Water quality (including silt, water pollution (direct or diffuse), run-off, nutrient enrichment, eutrophication etc); water management (including drainage, dredging or alterations to the water table), flow rate. Future potential to affect abstractions and discharges. Migratory fish vulnerable to obstacles to migration, | |
| 3130 Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea | Favourable: Unclassified | | |
| 1096 Brook lamprey Lampetra planeri | Unfavourable: Unclassified | | |
| 1099 River lamprey Lampetra fluviatilis | Unfavourable: Unclassified | | |

| 1106 Atlantic salmon <i>Salmo salar</i> | Unfavourable: Unclassified | overfishing and damage to habitats outside the site. | |
|---|---------------------------------|---|--|
| 1163 Bullhead <i>Cottus gobio</i> | Unfavourable: Unclassified | | |
| 1355 Otter Lutra lutra | Favourable: maintained | | |
| 1831 Floating water-plantain <i>Luronium</i> natans | Favourable: maintained | | |
| 1095 Sea lamprey Petromyzon marinus | Unfavourable: Unclassified | | |
| Afonydd Cleddau (Part) UK0030074 | | | |
| 3260 Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation | Favourable: Maintained | Water quality (including silt, water pollution (direct or diffuse), run-off, nutrient enrichment, eutrophication etc); water management (including drainage, dredging or alterations to the water table). Overexploitation of fisheries and nonnative species of animal or plant. Otters vulnerable to human disturbance, habitat loss, crossing highways, injury from fishing equipment. | |
| 7110 Active raised bogs | Unfavourable: Un- classified | | |
| 91E0 Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) | Unfavourable: Un- classified | | |
| 1096 Brook lamprey <i>Lampetra planeri</i> | Unfavourable: Un- classified | | |
| 1099 River lamprey <i>Lampetra fluviatilis</i> | Unfavourable: Un- classified | | |
| 1163 Bullhead <i>Cottus gobio</i> | Unfavourable: Un- classified | 1 | |
| 1355 Otter Lutra lutra | Favourable: Maintained | 1 | |
| 1095 Sea lamprey Petromyzon marinus | Unfavourable: Un- classified | | |
| Yerbeston Tops (All) UK0030305 | | | |

| 6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) | Unfavourable | Loss of habitat, under-grazing. |
|---|--------------|---------------------------------|
| 1065 Marsh fritillary butterfly Euphydryas (Eurodryas, Hypodryas) aurinia | Unfavourable | |

Terrestrial sites were preliminary assessments pending completion of full condition report. Source: Previous CCW data

SAC and SPA information from the JNCC website http://jncc.defra.gov.uk/page-1403

Natural Resources Wales, indicative condition assessment for marine SACs (2017-2018) <a href="https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/find-protected-areas-of-land-and-seas/indicative-feature-condition-assessments-for-european-marine-sites-ems/?lang=en

SPAs

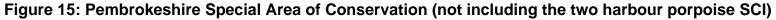
Table 93

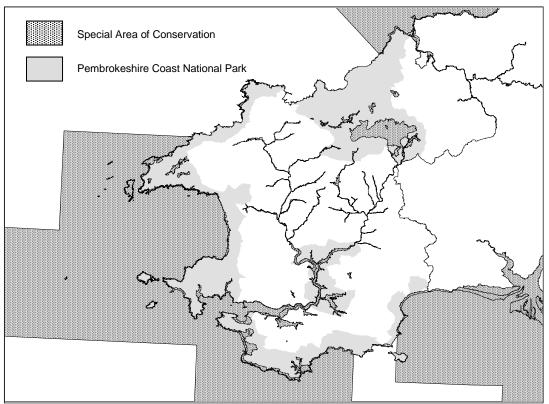
| SPA & SPA Important Species | Condition | Vulnerabilities/ potential threats | | | |
|---------------------------------|---------------------------------|---|--|--|--|
| Carmarthen Bay (Part) UK9014091 | Carmarthen Bay (Part) UK9014091 | | | | |
| Common Scoter (Melanitta nigra) | Not assessed | Fisheries management indirectly affecting food supply; water quality and pollution; sea-surface or aerial activity creating disturbance of feeding and/or resting scoter flocks; disturbance from major infrastructure development (e.g. offshore energy generation); aggregate exploitation causing changes to the sediment structures or sediment transport regime; major harbour infrastructure and maintenance regimes; on a broader scale long-term climatic change. | | | |

Three more sites are outside of the plan area: UK9014062 Ramsey and St. David's Peninsula SPA SM728284 area 830.51 ha

UK9014041 Grassholm SPA SM598092 area 1774.42 ha

UK9014051 Skomer, Skokholm and the Seas off Pembrokeshire SPA SM728092 area 166800.74 ha





Comparators

61% of SAC species features and 80% of SAC habitats features reported were reported in unfavourable condition in Wales in 2006 (Rural Development Plan for Wales, 2007-2013). In 2007 there were 11 international sites, with 71 features.

38% of SAC features in favourable condition

58% of SAC features in unfavourable condition

4% of SAC features – no data or unknown.

Overall the SAC features in the area were in an unfavourable condition.

Source: Previous CCW assessment (see SA of PCC LDP 1, based on 2007 assessment).

The condition of SAC and SPA species features on sites in Wales, as reported in 2013, remains mostly unfavourable (55%), with the exception of birds and mammals of which 86% and 68% were in favourable condition, respectively (SoNaRR, 2016).

Between 2002 and 2008, fewer than half of the species on the interim Section 7 list were considered to be stable or increasing in. Wales (along with the UK as a whole) did not meet the 2010 international and national biodiversity targets (SoNaRR, 2016).

Source within the SoNaRR report: NRW, 2015. Current data on SAC and SPA Annex I habitats and Annex II species. Internal data source. Natural Resources Wales.

Targets

Previous targets were that 95% of international sites to be in favourable condition by 2010, and also that all sites to be in favourable condition by 2026 (Rural Development Plan for Wales, 2007-2013).

Recent targets show that Wales (along with the UK as a whole) did not meet the 2010 international and national biodiversity targets.

National and Local Nature Reserves

The County has a range of national and local Nature Reserves which are entirely within the County (excluding the National Park designation).

Table 94

| NNR Name |
|------------------------------|
| Corsydd Llangloffan |
| Pengelli Forest (part) |
| Total |
| |
| Other Wildlife Site Reserves |
| Garn Turne Rocks |
| Goodwick Moor |
| Llangloffan Fen |

| Pembroke Upper Mill Pond (LNR) 9.018 ha |
|---|
| Part of Pengelli Forest |
| Westfield Pill |
| Teifi Marshes |
| |

Source: Wildlife Trust Website https://www.welshwildlife.org/nature-reserves/pembrokeshire/

SSSIs

There are over 33 Sites of Special Scientific Interest (SSSI) partly within or on the boundary of the County. These include those SSSIs designated for geology or partly for geology. Condition assessment of the SSSI features has not been carried out for all sites; however half of those features which have been assessed (at 24 sites) are in unfavourable condition (CCW review, 2007). Some geological SSSIs are also nationally important Geological Conservation Review (GCR) sites. The GCR was designed to identify those sites of national and international importance needed to show all the key scientific elements of the Earth heritage of Britain. Regionally Important Geodiversity Sites (RIGS), though not legally protected, are selected for historical, educational and aesthetic reasons in addition to scientific qualities, however there are currently no RIGS groups in Pembrokeshire. The Local Geodiversity Action Plans (LGAP) enable broad local partnerships with common goals for geoconservation and the sustainable use of geodiversity resources. There are no LGAPs in Pembrokeshire.

Comparators, targets and trend

There was a target for 95% of Welsh SSSIs to be in favourable condition by 2015 and all sites to be in favourable condition by 2026 (Environment Strategy, 2006).

The Nature Recovery Action Plan for Wales sets out how Wales will address the Convention on Biological Diversity's Strategic Plan for Biodiversity and the associated Aichi biodiversity targets for Wales. The Nature Recovery Action Plan will identify actions that can be delivered in the short term and set a course to deliver longer term commitments beyond 2020.

WG are committed to the vision of the Convention on Biological Diversity's (CBD) Strategic Plan for Biodiversity 2011 -2020:

'By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.' with its mission 'to take urgent action to halt the loss of biodiversity'.

562 of the total 1,016 Sites of Special Scientific Interest (SSSI) (as of 2010) have individually qualifying species and 54 have species assemblages which qualify. Many of the same species are also found on sites that qualify for their habitat. The list of species and habitats of principal importance in Wales (the interim Section 7 list) includes 557 species (NRW, SoNaRR, 2016).

Previous reporting stated that SSSIs cover over 264,000 ha in Wales. There are over 1,021 SSSIs. Terrestrial SSSIs - 70% are in unfavourable condition, 29% favourable condition and 1% partially destroyed (2003 data). "Favourable features are expected to stay favourable, and unfavourable ones to stay unfavourable" (SSSIs in Wales, 2005). (Rural Development Plan for Wales, 2007-2013).

29% of terrestrial (land-based) SSSI habitat features (such as woodland or heath) on SSSIs were classed as being in favourable condition. Inclusion of intertidal features, such as shorelines and estuaries, increases this to 35%.

1% of terrestrial SSSI habitat features were classed as partially destroyed, while the remaining 70% were classed as in unfavourable condition. Adding in the inter-tidal features reduces this to 64%. (CCW, Sites of Special Scientific Interest (SSSIs) in Wales, 2005). Terrestrial sites were also classified according to whether they were recovering or declining. 47% favourable or recovering, 52% unfavourable/declining, 1% partially destroyed (CCW, Sites of Special Scientific Interest (SSSIs) in Wales, 2005).

Local Biodiversity Action Plan and Nature Recovery Action Plan for Pembrokeshire

The Pembrokeshire Nature Partnership has drafted a Nature Recovery Action Plan for Pembrokeshire which updated the Local Biodiversity Action Plan to align with National policy.

The previous local biodiversity plan (parts 1 and 2) were for certain species and habitats which also included the Section 42 list produced by the WAG. This has been replaced by the Section 7 list of species and habitats in the Environment (Wales) Act and the Nature Recovery Action Plan for Pembrokeshire details those species and habitats known to occur in Pembrokeshire.

Source: Pembrokeshire County Council

https://www.pembrokeshire.gov.uk/biodiversity/pembrokeshire-nature-partnership-plans-and-guidance

Comparators, targets and trend

| Table 95: Trends in selected conservation features | | | | |
|---|------------------|------------------|-------------------|--|
| Condition | UK | Wales | Pembrokeshire | |
| | All Species | Priority Species | Selected Features | |
| | (3,816 assessed) | (249 assessed) | (23 assessed) | |
| Declining | 40% | 33% | 30% | |
| Stable | 31% | 43% | 35% | |
| Improving | 29% | 24% | 22% | |
| Data Deficient | - | | 13% | |
| Modified from State of Nature Report (2016) and State of Wildlife in Pembrokeshire Report (2016). | | | | |

By most measures and at all scales from the global to the local, the diversity and abundance of wildlife is in continued decline. The State of Nature report (2016) estimated that 7% of Wales' remaining species are at risk of extinction and that 33% of Wales' priority species are still in decline. Pembrokeshire is no exception. In 2016, the Pembrokeshire Biodiversity Partnership assessed that 30% of our selected features were in decline, with a further 13% which could not be assessed due to paucity of data4.

Sources:

The State of Nature Partnership (2016). State of Nature 2016: Wales. http://www.wildlifetrusts.org/sites/default/files/stateofnature2016_wales_english_1_sept_pages.pdf

Pembrokeshire Biodiversity Partnership (2016). State of Wildlife in Pembrokeshire Update: April 2016. https://www.pembrokeshire.gov.uk/biodiversity/pembrokeshire-nature-partnership-projects-and-reports

Wales Biodiversity Partnership: https://www.biodiversitywales.org.uk/

Issues/constraints/gaps

Main threats to LBAP/priority species are habitat loss, degradation due to agriculture, management practice and infrastructure development. The main threats to habitats are habitat loss, degradation due to agriculture, management practice and infrastructure development. Climate change, global warming, sea level rise are also threats to biodiversity.

The most common threat to species in Wales is habitat loss / degradation due to agriculture. Intensive management, losses of field margins and inappropriate grazing regimes have all taken their toll on priority species habitats.

Other issues are specific to the designated sites.

Trees, Woodland and Hedgerows

There is a generally sparse coverage of woodland in Pembrokeshire (WAG, 1999). The area covered by ancient woodlands is approximately 1284.61 ha (Pembrokeshire County Council Map Layers). There are over 200 Tree Preservation Orders (excluding the National Park). There can be more than one tree per TPO.

Hedgerows are important for biodiversity providing wildlife corridors and important landscape features. There is no data on the length of hedgerows in the County. However a Pembrokeshire Towns: a Green Infrastructure Action Plan (2018) which identifies opportunities for green infrastructure in specific settlements.

A Tree Cover in Pembrokeshire report (2013) highlights the tree resource in Pembrokeshire.

Source: Natural Resources Wales https://naturalresources.wales/media/682946/pembrokeshire-tcwtc3-technical-annex.pdf

Comparators, targets and trend

Extent of tree cover in Wales is 13.7 % (Forestry Commission, 2006). Broadleaved woodland has historically been declining.

Invasive species

There are invasive non-native species (INNS) present in the County, for example Japanese knotweed, winter heliotrope, Himalayan balsam and giant hogweed, however the extent of cover is not known.

The GB Invasive Non-native Species Strategy provides a framework on how to minimise the risks posed by INNS. The strategy sets out key aims and actions for addressing the threats posed by INNS. The current strategy covers 2015 to 2020 and replaces the first strategy published in 2018.

The Pembrokeshire Nature Partnership have also produced an Invasive Non-native Species Action plan

Sources:

GB Invasive Non-native Species Strategy:

http://www.nonnativespecies.org/index.cfm?sectionid=55

Pembrokeshire Nature Partnership: https://www.pembrokeshire.gov.uk/Objview.asp?object_id=3651

Data Gaps

Overall up to date condition of SSSIs and other biodiversity sites.

Length and location of hedgerows.

Conservation objectives for Natura 2000 sites.

Implications

Development can have both direct and indirect impacts on biodiversity at all levels. The LDP needs to have regard to biodiversity, fauna and flora, by conserving and enhancing habitats and species, meeting statutory requirements and minimise fragmentation of habitats, habitats loss and impacts from pollution, noise and light. Planning can be beneficial to biodiversity for example through incorporating ways of enhancing habitats in the design and creating new benefits. Planning can also be used to retain wildlife corridors. The SA objective should be updated in relation to the Environment (Wales) Act duty.

The SA objectives address issues such as:

- · Protecting designated sites and enhancing the interest features
- · Conserving and enhancing habitats in urban and rural areas
- Avoid further habitat fragmentation and encourage improved connectivity through the planning process, promoting green infrastructure provision.
- Integrating protection and creation of habitats into the design of new developments from the outset
- · Promoting biodiversity gain through planning
- Promote ecosystem resilience
- Protecting biodiversity also impacts the economy, through increased visitors

13. Cultural heritage and historic environment, including landscape Baseline summary

Pembrokeshire (excluding the area of National Park Designation) has 1636 listed buildings, 248 scheduled monuments, 20 Historic Parks and Gardens, 24 Conservation Areas and 1 Townscape Heritage Initiative (Haverfordwest THI, Pembroke Dock has ended) which make up the special natural characteristics and cultural heritage of the area which require protection and enhancement.

The Historic Environment Record (HER) which used to be known as the SMR (Sites and monuments record). Scheduled Ancient Monuments represent a small percentage of total historic assets.

Listed buildings

1636 Listed buildings are recorded within Pembrokeshire Planning Authority area.

Grade I 23 listed buildings Grade II* 110 listed buildings Grade II 1503 listed buildings (Conservation Team, PCC, 2018)

However, a buildings at risk survey was undertaken in 2014. The report identifies that 151 are at risk, 212 are vulnerable and 1267 are not at risk (Buildings at Risk Survey, PCC, 2014).

Sources: HAA web site 23 July 2018 www.haabase.com

Cadw web site report (all Pembrokeshire minus NPA record of 280 http://cadw.gov.wales/historicenvironment/recordsv1/cof-cymru/?lang=en

PCC web site 2018 and Q Gis layer

PCC web site, https://www.pembrokeshire.gov.uk/listed-buildings-and-conservation-area

Scheduled Monuments (SMs)

248 scheduled monuments (Cadw Historic Environment Record). There is a lack of information on the condition of SMs, however many SMs are in a poor condition.

Source: Cadw website advises last published volume was 2007 and in preparation for the introduction of the statutory register, Cadw has undertaken a thorough review of the boundaries of all registered historic parks and gardens. Before the commencement

of the statutory register in 2018, Pembrokeshire County Council will consult with owners and occupiers on the results of those reviews and any boundary adjustments that may be required. After the register comes into force, information about registered sites will be made available on Cof Cymru, Cadw's online resource for national historic assets.

Source: http://cadw.gov.wales/historicenvironment/protection/historicparksandgardens/?lang=en

Historic Parks and Gardens

There are currently 20 Historic Parks and Gardens in the County (excluding the National Park area) which cover a total of 0.40% (4.12 km² or 412 ha). A review is underway prior to the statutory register of Historic Parks and Gardens coming into force later in 2018.

- 111 Main Street, Pembroke
- Blackaldern
- Castell Malgwyn
- Castle Hall
- Cilwendig
- Ffynone
- Fishguard Bay Hotel
- Great Harmeston
- Haroldston
- Haverfordwest Priory

- Kilgetty
- Lamphey Bishops Palace and Lamp
- Landshipping
- Manorwen
- Merrixton House Farm
- Molleston Baptist Chapel
- · Monkton Old Hall and Vicarage
- Orielton
- Plas Glyn-y-mel
- Scolton Manor

Conservation areas

There are 24 areas which cover 0.53 0.34% of the County (599.64 ha) Conservation Area, size (hectares)

- Carew 1.92
- Carew Cheriton 4.33
- Cosheston 11.35
- Eglwyswrw 5.21
- Fishguard 18.37
- Goodwick 32.46

- Haverfordwest 49.43
- Honeyborough 4.54
- Lamphey 30.89
- Llangwm 16.53
- Llawhaden 19.94
- Lower Town 19.30

- Mathry 4.81
- Milford Haven 49.44
- Narberth 12.57
- New Moat 0.20 hectares
- Neyland 17.86
- Pembroke 97.75
- Pembroke Dock 144

- Penally 9.58
- Scotsborough House 0.80
- St Dogmaels 26.25
- St Florence 7.53
- Wiston 14.58
- Sum = 599.64

Country Parks

There are two country parks in the area: Llys-y-fran Country Park and Scolton Manor (combined area of 140.001 ha).

Townscape Heritage Initiative

Townscape Heritage Initiative schemes aim to stimulate economic regeneration through historic building conservation. There is one scheme in the plan area in Haverfordwest. A former Townscape heritage Initiative at Pembroke Dock ended in 2014. The Pembroke Dock THI restored and renovated the historic buildings of the waterside town such as the Garrison Chapel and Market Hall in the former Royal Naval Dockyard

The Haverfordwest Townscape Heritage Initiative is a partnership project jointly funded by Pembrokeshire County Council, The Heritage Lottery Fund, Cadw and the Department of Enterprise, Innovation and Networks at the Welsh Assembly Government.

Under the scheme over £2.5m in grant aid was spent refurbishing historic properties in the town's Conservation Area focusing on High Street, Market Street, Hill Lane and Goat Street during Phase 1, and repair or refurbishment was undertaken to 23 properties. Phase 2 will focus on Castle Square, Market Street and High Street and grant aid of £2.65m is being made available.

Local landscape and built heritage distinctiveness

Overall, much of Pembrokeshire outside of the National Park is formed by traditional rolling lowland in agricultural use where traditional hedgerows and hedgebanks are a distinctive feature, and the LANDMAP assessment has identified that traditional field boundaries should be retained and managed appropriately. Traditional hedgerows also provide important links for biodiversity.

The built heritage includes locally distinctive non-listed buildings and building materials which are present throughout the County and contribute to the diverse townscapes and landscapes.

Landscape

Pembrokeshire's landscape ranges from parts of the coastline to open hills, valleys and woodland and secluded tree-lined rivers and estuaries to areas with industrial development and populated villages and towns. The LDP review will have to integrate development pressures with the need to conserve the special characteristics of the area.

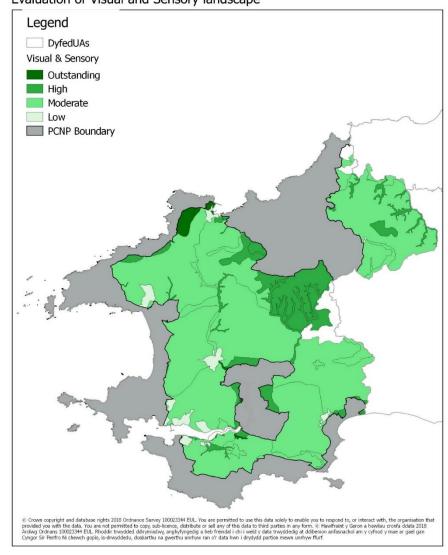
The coastal sections of Pembrokeshire excluding the National Park area, is a small length of coastline to the east of Amroth, parts of the Milford Haven Waterway, and parts of the Teifi Estuary. There are four historic landscapes (landscapes of outstanding or special historic interest) which are partly within the plan area, namely Pen Caer, Lower Teifi Valley, Mynydd Preseli and Milford Haven Waterway.

Previous industrial processes such as quarrying, mining and agricultural practices have also impacted the landscape.

A LANDMAP assessment carried out by Natural Resources Wales (formerly CCW has been quality assured and is available on the geo-portal for Wales website http://lle.gov.wales/home

Overall evaluation of the visual and sensory layers of low, moderate, high and outstanding value of landscape illustrates that the majority of Pembrokeshire is classified as moderately important, with areas of high importance east of the Cleddau river and in coastal areas, including Strumble head and on the Preseli Mountains. Areas of low visual and sensory value are found at built areas and previously developed land. This value does not account for historic, cultural or biodiversity value.

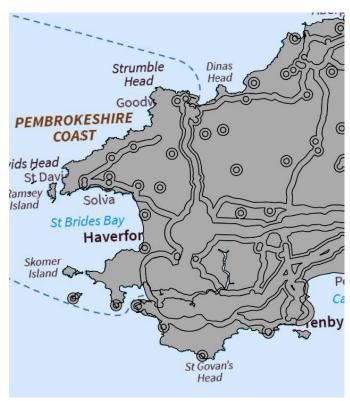
Figure 16: LANDMAP Pembrokeshire Evaluation of Visual and Sensory landscape



Tranquillity and light pollution

Tranquillity is essentially a subjective issue given that it is a measure of the experience of calmness in the surrounding environment. A definition has been created so that mapping can occur – "places which are sufficiently far away from the visual or noise intrusion of development or traffic to be considered unspoilt by urban influences".

Pembrokeshire tranquillity zones



A map showing tranquillity across Wales can be viewed at this website: http://lle.gov.wales/catalogue/item/TranquilAreasWales/?lang=en

Large urban conurbations in south east England, north west England, the west Midlands and south east Wales are described as 'significantly disturbed'. Light pollution has also increased significantly.

Source:

Lle Welsh Government and Natural Resources Wales geo-portal, accessed 2018.

Urban and accessible greenspace

Common land covers some 5653 ha of Pembrokeshire or 3.5% of the land area (including Pembrokeshire Coast National Park). There are 249 commons, of which 113 are less than one hectare in size. The largest, Mynydd Preseli is 2132ha. Seventeen percent of the total numbers of commons in Wales fall within Pembrokeshire. There are 42 Village Greens covering an area of some 52ha.

Source: https://www.pembrokeshire.gov.uk/common-land

An assessment of proportion of people within 300m of natural green space (Urban greenspace standards, 'Climbing Higher' Policy) has not been carried out, however the County is predominantly rural, therefore most of the population are relatively close to natural green spaces. An urban open space survey is currently being developed within the Council and data will be added when available.

A Green Infrastructure report (2018) for Pembrokeshire provides a framework to recognise the value of green infrastructure, making improvements to these areas to provide a range of environmental and regeneration benefits. Towns included within the study were:

Fishguard and Goodwick
Haverfordwest
Milford Haven
Narberth
Newport
Neyland
Pembroke
Pembroke Dock
Saundersfoot
St Davids
Tenby.

An action plan outlines all the green infrastructure opportunities identified within each town and presents key projects which are more deliverable in the short term and would bring demonstrable benefits.

Implications

The LDP should seek to safeguard and enhance our cultural heritage, including architectural and archaeological heritage. The plan should also seek to promote cultural tourism in the area, and in reference to Welsh culture and Welsh language.

The LDP will need to sustainably protect landscapes, while promoting the public's right of access to open countryside. The plan should also have regard for sustaining and enhancing the character of townscapes through appropriate design and development. Development impacts landscapes at a broad and local scale.

Distinctiveness of areas can be encouraged by planning through the protection and promotion of the desirable characteristics of particular neighbourhoods.

The high quality of Pembrokeshire's landscape makes a significant contribution to the high quality of life in the County. The current plan highlights the on-going work that is being completed on measuring landscape quality, for instance through LANDMAP. The Plan also notes that targets will be developed for safeguarding listed buildings.

The plan will also have regard for the Pembrokeshire Coast National Park designation, particularly the significant landscape and cultural asset which this designation contributes.

The SA objectives should promote high quality design in keeping with its context in the landscape to support local distinctiveness, though recognise the role of innovation in the built environment. The promotion of sustainable construction methods is also encouraged. The objectives should also increase sustainable access and opportunities for enjoyment of the landscape, geological, built and archaeological heritage where appropriate.