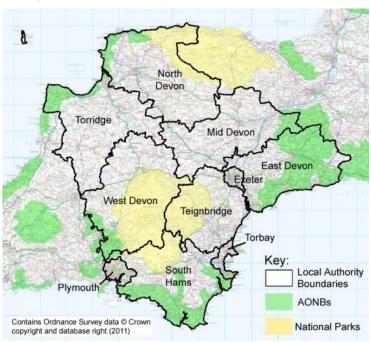




PLYMOUTH 2011

KEY FACTS

- > Plymouth produced 1,414 kt of end user CO2 in 2008, the sixth highest for a local authority in the South West. Between 2005 and 2008, end user CO2 emissions decreased by 5%.
- > Plymouth residents were responsible for a total of 5.5 tonnes of CO2 per capita in 2008. This was 29% lower than the average for the South West and the fifth lowest for a local authority in the South West.
- > Between 2005 and 2008 per capita emissions reduced by 8% in Plymouth.
- > Plymouth has the third smallest authority area in the South West, with over 84,000m2 within its realm, 0.3% of the South West area. The largest proportion of land in Plymouth is classified as green space, accounting for 35,000m2 or 42% of its total area.
- > 1,362 million vehicle kilometres were made in Plymouth unitary authority area in 2009. This was the sixth lowest recorded by a unitary or county council, accounting for just 2.8% of the regional total.
- > Between 1993 and 2009, the total number of vehicle miles travelled within Plymouth area increased by 16% (197 million km).
- > In 2009/10, Plymouth City Council had the fourth highest amount of residual waste in the South West with 680.84 kg/household. This was the highest produced in Devon
- > Plymouth City Council in 2009/10 had the fifth lowest amount of recycling in the South West with 31.25%
- > Plymouth landfilled 82,629 tonnes, which was the eighth highest amount of tonnes landfilled in the South West.
- > The resident population of Plymouth in June 2010 was estimated to be 258,700.
- > Plymouth City Council need to build around 30,000 new homes. Their target is to build 80% of new homes on brown field sites (previously developed land) by 2026. The target includes 12,250 homes to be built by 2016.
- > Plymouth is predicted to have a household increase of 23.6% between 2008 and 2033, a total of 26,000 additional households. This is below the 30% predicted increase for the South West. Within Plymouth there are a few areas with higher concentrations of properties at risk of flooding. These include Devonport and Plympton.
- > There is a Catchment Abstraction Management Strategy (CAMS) for the Tamar. It sets out how the Environment Agency will manage water abstraction until 2014 for the Tamar catchment.
- > Plymouth citizens had an average eco-footprint of 4.38 gha. This was the lowest recorded in both Devon and the South West Region.
- > Plymouth City Council had an allocation of 73,063 tonnes and only landfilled 63,041 tonnes (86.3%) of their BMW.



Key Information Sources:

~ Plymouth Unitary Authority

~ Plymouth Informed

ACTS TO REDUCE CLIMATE CHANGE AND ITS CONSEQUENCES

CLIMATE CHANGE

> Season Seasonal climate (low and high emissions scenarios)

By 2050	By 2080
•	•

SPRING Warmer by 1.0 to 2.0°C. Warmer by 1.5 to 3.5°C

Rainfall similar to now. Rainfall similar to now.

SUMMER Warmer by 1.5 to 3.5°C. Warmer by 2.0 to 5.5°C

Drier by 15 to 30% Drier by 25 to 55%.

AUTUMN Warmer by 1.5 to 3.0°C Warmer by 2.0 to 5.0°C

Drier by 0 to 10% Drier by 5 to 15%

WINTER Milder by 1.0 to 2.0°C Milder by 1.5 to 3.5°C

Wetter by 5 to 15% Wetter by 10 to 30%

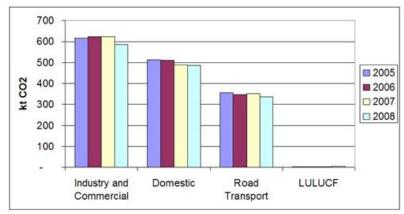
Snowfall will decrease by 70-90%

CARBON DIOXIDE

> Plymouth produced 1,414 kt of end user CO2 in 2008, the sixth highest for a local authority in the South West.

> Between 2005 and 2008, end user CO2 emissions decreased by 5%, from 1,489 kt to 1,414 kt. The highest proportion of end user emissions in Plymouth in 2008 was Industry and Commercial, accounting for 41% (586 kt), followed by Domestic with 34% (486 kt). Plymouth was respectively the fifth and fourth highest local authority in the South West for these sources.

CO2 Levels 2005-08: Plymouth



- > Plymouth residents were responsible for a total of 5.5 tonnes of CO2 per capita in 2008. This was 29% lower than the average for the South West of 7.8 tonnes per capita, and the fifth lowest for a local authority in the South West.
- > Between 2005 and 2008 per capita emissions reduced by 8% in Plymouth from 6.0t to 5.5t.

Please note - we are reporting on end user CO2 emissions, which are used as the <u>National Indictor for Sustainable</u> <u>Development for the UK</u>. An alternative measure of CO2 is available from the <u>Stockholm Institute</u>. As the data presented is from 2008, the local authority comparisons for the South West include district authorities in Cornwall and Wiltshire which have now been replaced by Unitary Authorities.

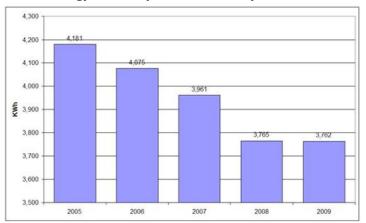
Source: Sub-national energy consumption statistics, DECC

ENERGY CONSUMPTION

- > There were 114,900 domestic electricity meter points in Plymouth in 2009, 5% of the regional total of almost 2.4 million.
- > An average of 3,762kWh of electricity was used per consumer in Plymouth during 2009, 15% (686kWh) lower than the regional average of 4,448kWh and 9% (390kWh) lower than the Great Britain average of 4,152kWh. This was the lowest average for a district or unitary authority in the South West.

Source: AEA for DECC

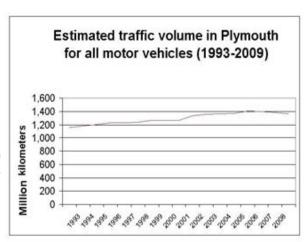
Energy Consumption 2005-09: Plymouth

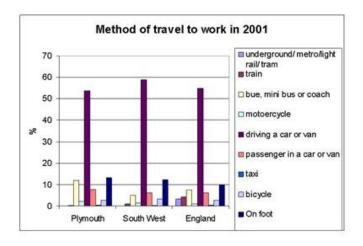


TRANSPORT

> 1,362 million vehicle kilometres were made in Plymouth unitary authority area in 2009. This was the sixth lowest recorded by a unitary or county council, accounting for just 2.8% of the 48,588 million km total for the region as a whole.
> Between 1993 and 2009, the total number of vehicle miles travelled within Plymouth area increased by 16% (197 million km). This was much lower than the average increase in the South West of 26%.

Source: Department of Transport





COMMUTING

> The most popular form of commuting in Plymouth with 53.8% was driving, similar to the South West result of 58.7%.

> Walking to work was the second most popular method. This was higher in Plymouth with 13.2% than the South West average of 12.1%, and much higher than the UK average of 9.9%.

Source: Office of National Statistics

PROTECT AND IMPROVE AIR, LAND AND WATER QUALITY

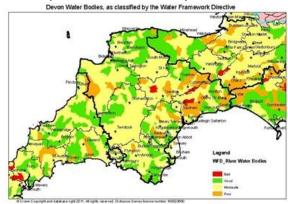
AIR OUALITY

- > Plymouth has declared three Air Quality Management Areas (AQMA).
- > The areas are: Mutley Plain, and Mannamead Road for Nitrogen Dioxide.
 - I. Exeter Street, between Charles Cross Roundabout and Cattedown Roundabout, and Embankment Road from Cattedown Roundabout to the junction of Stenlake Terrace and Hele's Terrace for Nitrogen Dioxide
 - 2. Exeter Street Petrol Station, St Thomas House, 77-79 Exeter Street and Holy Cross Roman Catholic School, Beaumont Road for Benzene emissions.
- > To view the areas click here.

Source: **DEFRA**

WATER QUALITY

- > There are 5 river water bodies within Plymouth. Our latest assessment of these classified 100% as moderate.
- > The main reasons for less than good status include: impacted fish communities, physical modification, high levels of copper, phosphate and an impacted diatom community.



> For information on the activities taking place to help your local river improve, please see the <u>Earth Chattering pages</u> for an interactive map and much more information.

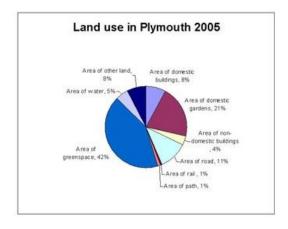
Please note - Water bodies do not fit exactly within local authority boundaries. The figures have been derived from those water bodies whose centres are within the district in question. If all water bodies within a district had been included, double accounting would have taken place. Some water bodies have yet to be classified. For the purpose of this exercise, these have been removed from the figures published.

Source: Environment Agency

LAND USE

- > Plymouth covers over 84,000m2.
- > Plymouth has the third smallest authority area in the South West, with over 84,000m2 within its realm, 0.3% of the South West area
- > The largest proportion of land in Plymouth is classified as green space, accounting for 35,000m2 or 42% of its total area. This is lower than the Devon county average of 92.4% and regional average of 91%, but more in keeping with a more urban area.

Source: Communities and Local Government



QUALITY OF LIFE

- > The ninth Local Environmental Quality Survey conducted by Keep Britain Tidy, was carried out between April 2009 and March 2010. The Summary Report key messages included:
- ~ Overall Standards within England remain the same as last year, with no change in the Cleansing Index score, which is 76, out of a possible 100.
- \sim 63% of standards for all LEQ indicators were either Good or Satisfactory. The South East joins the South West as top performing region overall, for the first time this year.
- ~The South West has been either the top performing region or joint top performing region since the 2007/08 Survey.
- > The survey carried out between April 2006 March 2007, is available down to Local Authority Level, please click here for the details.

Source: Keep Britain Tidy

NITRATE VULNERABLE ZONES

- > Nitrate Vulnerable Zones (NVZs) are areas of land that drain into waters polluted by nitrates, such that the ecosystem is at risk of being disturbed, or the water is likely to exceed 50 milligrams of nitrate in each litre.
- > Within Plymouth, there are no areas designated NVZ or of deferred slurry storage.
- > NVZ regulations come fully into force on 1 Jan 2012, except in deferred Slurry storage areas which have until 1 Jan 2013.
- > For more information on NVZ, please see Environment Agency pages.
- > For detailed maps relating to NVZ areas, please see source pages.

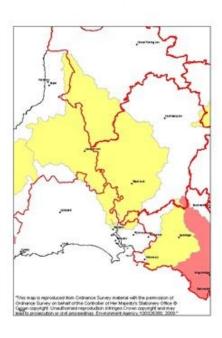


Source: **Environment Agency**

CATCHMENT SENSITIVE FARMING

- > Catchment Sensitive Farming (CSF) gives advice on dealing with diffuse pollution from agriculture and the impact on water courses.
- > CSF is a voluntary initiative, where as NVZs is a statutory obligation. CSF looks at: best practice on manure and pesticide usage; Promoting good soil structure; protecting watercourses from run-off and best practice on stock management.
- > Two catchments are part of the current study: Tamar and Tavy with an area of 1,357km; Yealm and Erme with an area of 253km2
- > Even though the Tamar and Tavy projects are upstream of Plymouth, they could significantly impact Plymouth's river and bathing water qualities. Good farming practises reduce runoff pollutants and improve water quality.

Source: **Environment Agency**



SOIL

- > A map showing the soil types within the Plymouth City Council Unitary Authority.
- > This area is made up of medium textured soils. These soils have been overbuilt as the city of Plymouth developed.
- > Soil type is a major factor in determining the type of agriculture that can be supported. Typically medium textured soils support mixed farming. The 2007 DEFRA agricultural census data on the number of holdings (farm types) within Plymouth reveals little since much of the DEFRA data is suppressed due to the small sample size.
- > The latest (2010) DEFRA agricultural census data for Plymouth & Torbay & Devon County Council indicates almost 486 000ha of farmed land supports over 8100 farms of which 1476 are greater than 100ha in size. 5% of this farmed area is wheat the dominant arable crop. 63% of the farmed land is permanent grass supporting almost 236,000 dairy cattle, about 31% of the total dairy herd in the South West.

Source: **DEFRA**

POLLUTION INCIDENTS

- > For the period April 2005 March 2010, there was I incident of major impact to land and water.
- > In addition there were 8 incidents of significant impact to water, and a further incident of significant impact to land and water.
- > For the period April 2010 March 2011 inclusive, there was I incident of major impact to water in Plymouth City Council area. > For the same period there was I incident of significant impact to air, none to land, and 4 incidents of significant impact to

water.

Source: Environment Agency

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Soil types in Plymouth

MUNICIPAL WASTE

- > Plymouth City Council had the fourth highest amount of residual waste in the South West with 680.84 kg/ household. This was the highest produced in Devon.
- > In 2009/10, South Hams had the lowest level of residual waste in the South West with 341.04kg/household. The highest in the South West was Isles of Scilly Council with 1,452kg/household.

Recycling in the South West (2009/10)



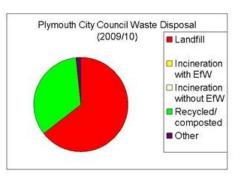
- > Recycling and composting has increased significantly in the South West, from 14.9% in 2000 / 2001 to 43.5% in 2009 / 2010.
- > Plymouth City Council in 2009/10 had the fifth lowest amount of recycling in the South West with 31.25%.
- > The highest rate of recycling in the SW was Cotswold District Council with 60.4%, and the lowest rate in the SW was Isles of Scilly with 18.9%.

Source: **DEFRA**

TOTAL MUNICIPAL WASTE LANDFILLED

> Plymouth landfilled 82,629 tonnes, which was the eight highest amount of tonnes landfilled in the South West.
> Bournemouth Borough Council landfilled the least percentage waste in 2009/10 (37.8%). Plymouth City Council landfilled the largest percentage of waste in 2009/10 (64%). Devon County Council however landfilled the largest amount in tonnes with 194,720 tonnes.





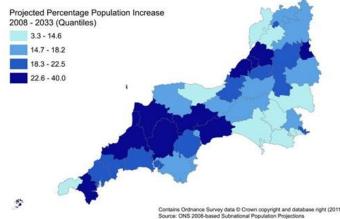
PUTTING PEOPLE AT THE HEART OF WHAT WE DO

POPULATION

- > The resident population of Plymouth in June 2010 was estimated to be 258,700.
- > Of this population, 16.9% were aged 0 15, 67.2% were of working age (16 64), and 15.9% were of pensionable age (65+).
- > Plymouth has a greater proportion of it's population of working age (67.2%), than the South West (62.8%) or England (64.8%).

Source: Office of National Statistics

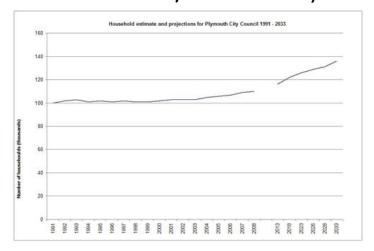
Population Growth in the South West: 2008-2033



NUMBER OF HOUSEHOLDS

- > Plymouth City Council need to build around 30,000 new homes. Their target is to build 80% of new homes on brown field sites (previously developed land) by 2026. The target includes 12,250 homes to be built by 2016.
- > Plymouth is predicted to have a household increase of 23.6% between 2008 and 2033, a total of 26,000 additional households. This is below the 30% predicted increase for the South West.

Household Estimate and Projections 1991-2033: Plymouth



Please note - Figures to 2008 are based on ONS mid-year population estimates and projected rates of household formation from trends in Census and Labour Force Survey data. All projections are 2008-based. The 2008-based household projections are linked to the Office for National Statistics 2008-based Population Projections, and are not an assessment of housing need or do not take account of future policies. They are an indication of the likely increase in households given the continuation of recent demographic trends.

Source: Communities and Local Government

NEW HOMES ON PREVIOUSLY DEVELOPED LAND

- > The proportion of new buildings built in England on previously developed land, rose 23% between 1994-2009. More than half of local authorities in the South West has an increase higher than the English average.
- > Over the same period in the South West, South Gloucestershire had the highest overall increase with 57%, and the lowest was Isles of Scilly with -10%. The second lowest local authority was jointly Cotswold and Torbay with only a 5% increase over the same period.
- > The increase in Plymouth was 49%. This was the second highest overall increase in the South West, and the highest increase in Devon.
- > For the period 2006-2009, only 4 councils achieved over 90% of new dwellings on previously developed land in the South West. These were Bournemouth (97), Poole (97%), City of Bristol (95%) and Christchurch (94%).

Source: Communities and Local Government

FLOODING

- > One in six properties in England are at risk of flooding. In the South West over 200,000 properties are at risk of flooding from rivers or the sea and around 6,000 properties are at risk from coastal erosion in the South West.
- > The causes of flooding in Plymouth are varied; rivers, tidal, surface water or combinations of the three, depending on location.
- > Within Plymouth there are a few areas with higher concentrations of properties at risk of flooding. These include Devonport and Plympton.
- > To see locations at risk of flooding in Plymouth, please click here for the Environment Agency flood map.

Source: **Environment Agency**

PLANNING APPLICATIONS AND FLOOD RISK

- > The Environment Agency lodged objections to 6,200 planning applications in England and Wales on the grounds of flood risk in 2007/2008 up from 4,750 in 2006/2007. Of these, 1,160 objections were in the South West, accounting for almost 19% of the national total. Two major and twenty one minor developments were approved by local authorities contrary to advice in the South West. The two major were in Carrick (application for mixed use) and Weymouth & Portland (residential). There were no major or minor developments approved contrary to advice in Plymouth.
- > In 2008/09, a summary report was published which had no detailed information to local authority level. > The number of planning applications to which we objected on flood risk grounds fell slightly to 5,198 in 2008/09 compared to 6,232 in 2007/08, representing 43% of consultations received. This is the first fall in the

proportion of consultations objected to since 2001/02.

Source: **Environment Agency**

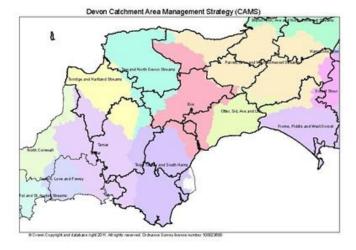
WORK WITH BUSINESSES AND THE PUBLIC SECTOR TO USE RESOURCES WISELY

WATER RESOURCES

> There is a Catchment Abstraction Management Strategy (CAMS) for the Tamar. It sets out how the Environment Agency will manage water abstraction until 2014 for the Tamar catchment.

> Click here for the full document

Source: Environment Agency

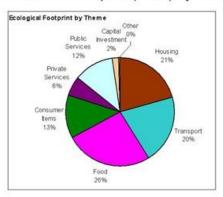


ECO FOOTPRINT

- > The ecological footprint is an indicator of the total environmental burden we place on the planet. It represents the area of land needed to provide raw materials, energy and food, and to absorb pollution and waste created. It is measured in global hectares (a hectare of land with world average productivity) and is usually expressed as a per person measure. The Stockholm Environmental Institute (SEI) calculates the ecological footprint of consumption activities.
- > One of the main features of an ecological footprint indicator is that it is based on consumption, not just domestic production. It takes into account the impact of all products that are consumed, whether they are produced in the country of consumption, or elsewhere in the world.
- > In 2006, an average UK citizen had an eco-footprint of 4.64gha, which is significantly above the available budget of 1.89 gha. The South West Regional average was 4.74 gha.
- > Plymouth citizens had an average eco-footprint of 4.38 gha. This was the lowest recorded in both Devon and the South West Region.
- > The ecological footprint of all local authorities in the UK is significantly above the available global budget. If everyone in the world consumed the same as a UK citizen we would need nearly three planets worth of resources.

Source: Resource Accounting

Plymouth Eco Footprint (2006) by Theme



LANDFILL ALLOWANCE TRADING SCHEME

- > In 2009/10 the amount of biodegradable municipal waste (BMW) landfilled by the 16 local authorities within the South West was 1,032,967 tonnes against their combined allocation of 1,134,910 tonnes.
- > Plymouth City Council had an allocation of 73,063 tonnes and only landfilled 63,041 tonnes (86.3%) of their BMW.
- > Only two councils in the South West exceeded their allocations. They were Gloucestershire County Council and South Gloucestershire Council.

Source: **Environment Agency**

Amount landfilled in 09/10 within the South West

