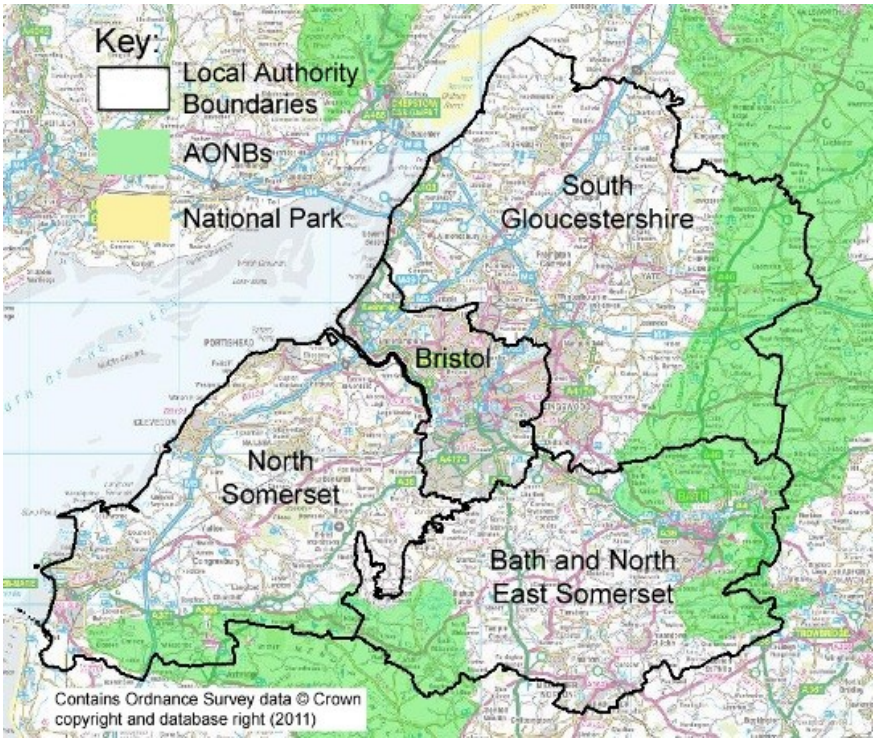
SW/O SOUTH WEST OBSERVATORY Local Profiles ENVIRONMENT

BRISTOL CITY 2011

KEY FACTS

> Bristol City produced 2,320 kt of end user CO2 in 2008, the highest for a local authority in the South West. Between 2005 and 2008, end user CO2 emissions decreased by 6.8%.
> Bristol City produced the second highest amount of Industry and Commercial emissions for a local authority in the South West and the highest amount of domestic emissions.
> Bristol City residents were responsible for a total of 5.4 tonnes of CO2 per capita in 2008, 31% lower than the South West 7.8 tonnes per capita. This was the fourth lowest in the South West.
> Between 2005 and 2008 per capita emissions reduced in Bristol City from 6.1 t to 5.4t.
> 2,197 million vehicle kilometres were made in Bristol City authority area in 2009. This was the eighth lowest recorded by a unitary or county council, accounting for just 4.5% of the regional total.
> Between 1993 and 2009, the total number of vehicle kilometres travelled within Bristol area increased by 11%.
> Bristol City Council were in the top half of the league table in the South West, with 551.71 kg/household of residual waste produced. This was the lowest to be produced in the West of England Counties.
> Bristol City Council in 2009/10 against the other South West Councils, was in the bottom half of the recycling league table with 37.0%.
> Bristol City Council landfilled 102,465 tonnes, which was the seventh highest amount of tonnes landfilled in the South West. However, they were also the sixth highest percentage landfilled (58.17%) in the South West.
> The population of Bristol City was estimated to be 441,300 in June 2010, 8.4% of the South West's total population of 5,273,700.
> Between 2008-2033, the number of households in Bristol are predicted to increase by 46.7%
> Bristol City is covered by the Bristol Avon, Axe and North Somerset Streams CAMS.
> In 2006, Bristol City had the lowest Eco footprint in Avon with 4.52gha. This was also joint fourth lowest in the South West Region with Gloucester.
> Bristol City Council had an allocation of 76,563 tonnes and only landfilled 74,337 tonnes (97%) of their Biodegradable Municipal Waste.



ACTS TO REDUCE CLIMATE CHANGE AND ITS CONSEQUENCES

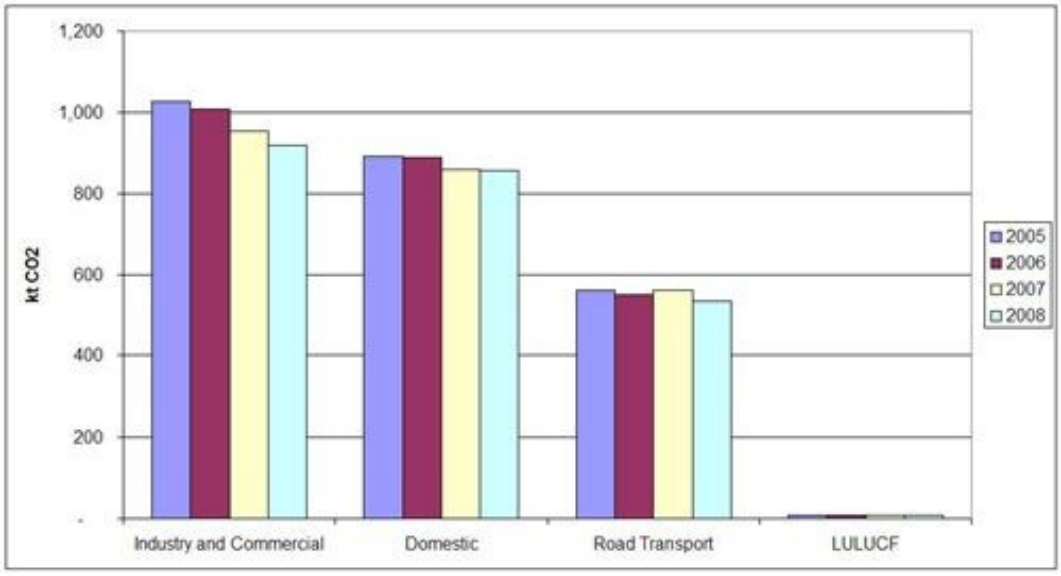
CLIMATE CHANGE

> Bristol City Council have a Climate Protection and Sustainable Energy Strategy. Please click here for more information.

CARBON DIOXIDE - END USER

> Bristol City produced 2,320 kt of end user CO2 in 2008, the highest for a local authority in the South West.
> Between 2005 and 2008, end user CO2 emissions decreased by 6.8%, from 2,489 kt to 2,320 kt.
> The highest proportion of end user emissions in Bristol City in 2008 was Industry and Commercial, accounting for 39.7% (920 kt), followed by Domestic with 36.9% (857 kt). Bristol City produced the second highest amount of Industry and Commercial emissions for a local authority in the South West and the highest amount of domestic emissions.

CO2 Levels 2005-08: Bristol



> Bristol City residents were responsible for a total of 5.4 tonnes of CO2 per capita in 2008, 31% lower than the South West 7.8 tonnes per capita. This was the fourth lowest in the South West.
> Between 2005 and 2008 per capita emissions reduced in Bristol City from 6.1 t to 5.4t.

Please note- *we are reporting on end user CO2 emissions, which are used as the National Indictor for Sustainable Development for the UK. An alternative measure of CO2 is available from the Stockholm Institute. 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

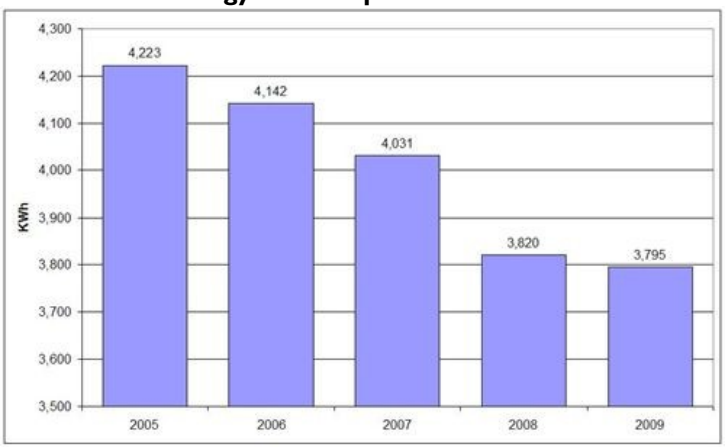
ACTS TO REDUCE CLIMATE CHANGE AND ITS CONSEQUENCES

ENERGY CONSUMPTION

> There were 189,400 domestic electricity meter points in Bristol in 2009, 8% of the regional total of almost 2.4 million.
> An average of 3,795kWh of electricity was used per consumer in Bristol during 2009, 15% (653kWh) lower than the regional average of 4,448kWh and 9% (357kWh) lower than the Great Britain average of 4,152kWh. This was the third lowest recorded by a unitary or district authority the South West, behind Plymouth (3,762kWh) and Weymouth and Portland (3,781kWh).

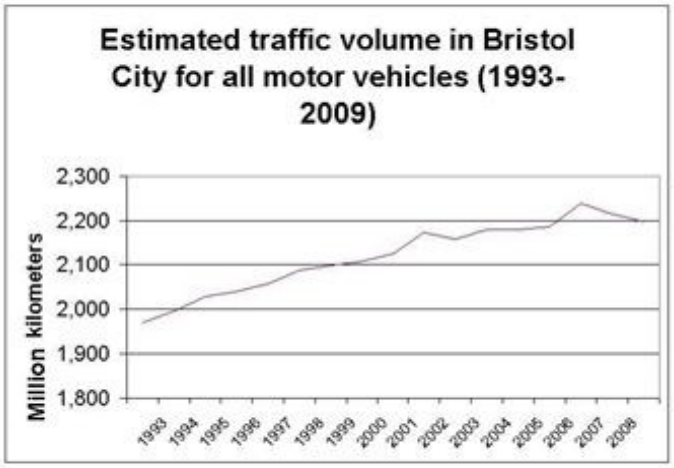
Source: AEA for DECC

Energy Consumption 2005-09: Bristol



TRANSPORT

> 2,197 million vehicle kilometres were made in Bristol City authority area in 2009. This was the eighth lowest recorded by a unitary or county council, accounting for just 4.5% of the 48,588 million km total for the region as a whole.
> Between 1993 and 2009, the total number of vehicle kilometres travelled within Bristol area increased by 11% (588 million km). This was significantly lower than the average increase in the South West (26%).



COMMUTING

> Driving to work is the most popular way to commute. In Bristol City 50.6% commute by car compared to the South West average of 58.7%.
> Walking to work in Bristol City is 15.6% which is slightly higher than the South West average of 12.1%, and much higher than the UK average of 10.0% of commuters.

Source : Office of National Statistics

PROTECT AND IMPROVE AIR, LAND AND WATER QUALITY

AIR QUALITY

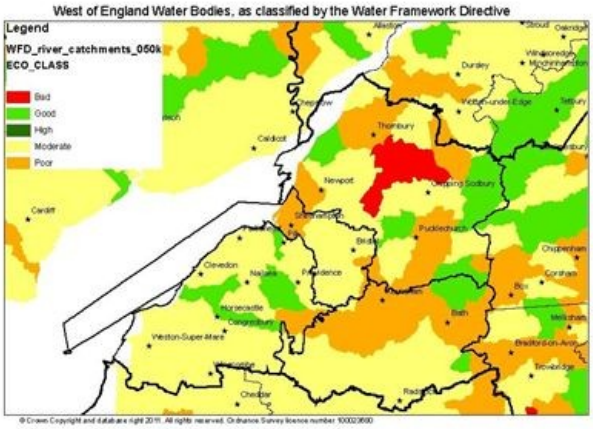
> There is one Air Quality Management Area in Bristol
> Please click here for more information.

Source: DEFRA

WATER QUALITY

> There are 5 river water bodies within Bristol classified as 20% poor, and 80% as moderate.
> The main reasons for less than good status include higher levels of nutrients e.g. ammonia, phosphate.
> For information on the activities taking place to help your local river improve, please see the Earth Chattering pages 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.*



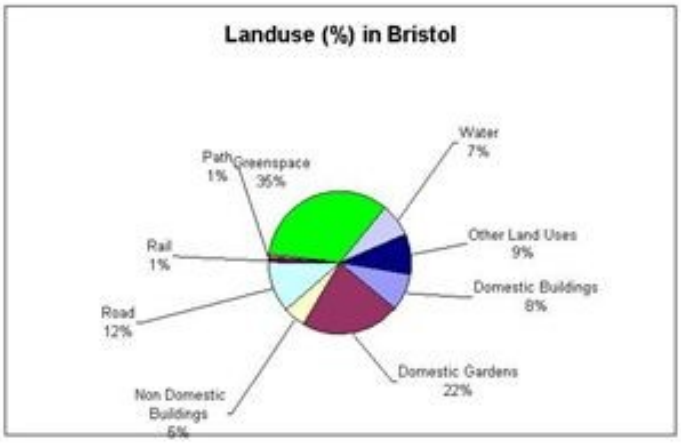
A map showing Water Framework Directive (WFD) water bodies from West of England

Source: Environment Agency

LAND USE

> Landuse during 2005 both the South West Region and the UK, the largest landuse came from Green Space with 90.7% and 87.5% respectively. The next largest area of land cover came in the form of domestic gardens with 3.1% in the South West, and 4.3% for the UK average.
> In Bristol, the two largest landuses are the same, however domestic gardens is significantly higher with 22.2% and green space is significantly lower with 34.4%.

Source : Communities and Local Government



PROTECT AND IMPROVE AIR, LAND AND WATER QUALITY

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.*

> *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 Bristol City Council, there is a small area designated NVZ with no areas 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.

Nitrate Vulnerable Zones (NVZs) in Bristol (2010)

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.
> There are no Catchment Sensitive Farming projects within Bristol City.

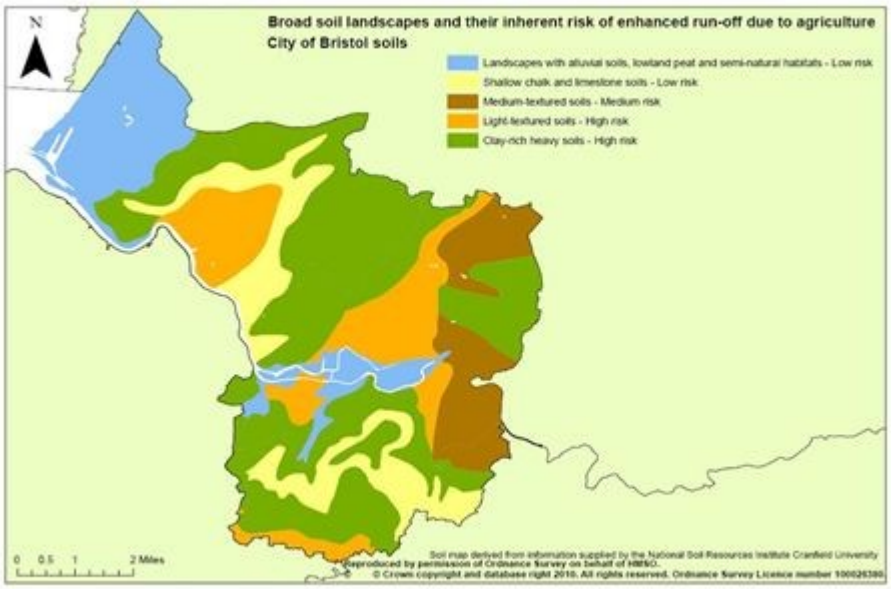
Source: Environment Agency

PROTECT AND IMPROVE AIR, LAND AND WATER QUALITY

SOIL

> In a broad landscape context this area is made up of a diverse range of soil types. Many of these soils have been overbuilt as the city of Bristol developed.
> Since soil type is a major factor in determining the type of agriculture that can be supported, the medium textured soils support mixed farming with clay rich heavy soils underlying the rich pastureland for dairying while the light textured soils support largely arable and horticulture.
> The latest detailed (2007) DEFRA agricultural census data available for the city of Bristol reveals little since much of the DEFRA data is commercially suppressed due to the small sample size with the only farm types listed as lowland grazing.

Source : DEFRA



A map showing Bristol soils

POLLUTION INCIDENTS

> For the period April 2005-March 2010 inc, there was 1 incident of major impact to water within Bristol City Council. In addition there was 1 incident of significant impact to air, 2 of significant impact to land, 1 incident of significant impact to land and water, and a further 6 incidents of significant impact to water.
> For the period April 2010- March 2011 inc, there were no incidents of major or significant impact to land, air or water in Bristol.

Source : Environment Agency

FLYTIPPING

> During 2009/10 there were 7112 reported incidents of flytipping in Bristol, the highest for a district or unitary authority in the region. This was a 29% increase from 5526 incidents in 2008/09. There were 28 prosecutions for flytipping, all of which had successful outcomes.

Source : DEFRA

Please note: *incidents of fly tipping are reported differently by each council. One may log black bin bags out on an incorrect day as a fly tipping incident where another council do not log this. Please be aware of these reporting discrepancies on Flycapture when looking at the data in comparison to other councils.*

PROTECT AND IMPROVE AIR, LAND AND WATER QUALITY

MUNICIPAL WASTE

> Bristol City Council was not in the top ten highest producers of residual waste produced however were in the top half of the league table in the South West, with 551.71 kg/household. This was the lowest to be produced in the West of England Counties.
> 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.

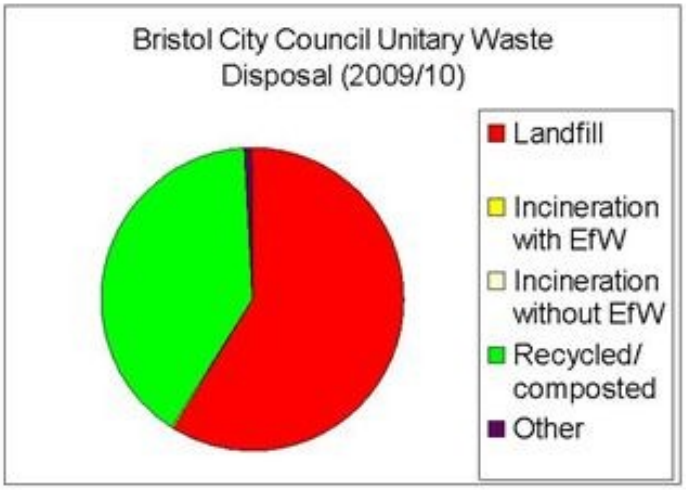
> Recycling and composting has increased significantly in the South West, from 14.9% in 2000 / 2001 to 43.5% in 2009 / 2010.
> Bristol City Council in 2009/10 against the other South West Councils, was in the bottom half of the recycling league table with 37.03%.
> The highest rate of recycling in the 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

> Bristol City Council landfilled 102,465 tonnes, which was the seventh highest amount of tonnes landfilled in the South West. However, they were also the sixth highest percentage landfilled (58.17%) 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.

Source: Environment Agency



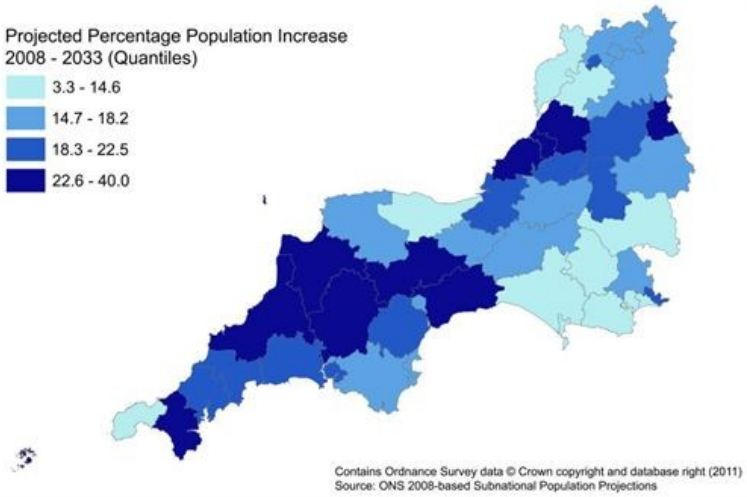
Waste disposal 2009/10 in Bristol

PUT PEOPLE AND COMMUNITIES AT THE HEART OF WHAT WE DO

POPULATION

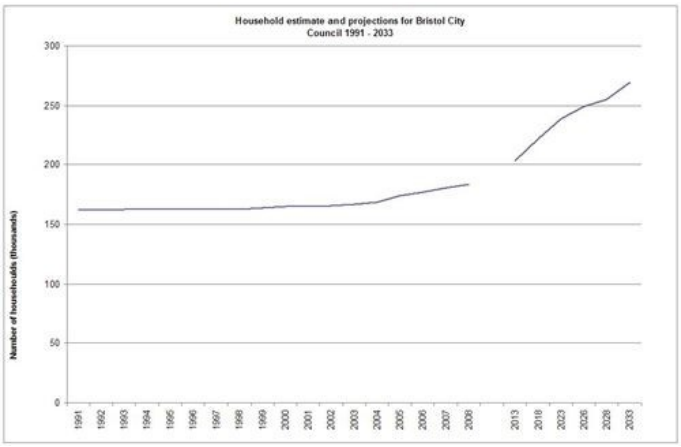
> The population of Bristol City was estimated to be 441,300 in June 2010, 8.4% of the South West's total population of 5,273,700.
> Of this population, 16.6% were aged under 15, 70.9% were of working age (16 – 64), and 12.5% were of pensionable age (65+).
> There were significantly more people of working age in Bristol (70.9%), than in the South West (62.8%), than in England (64.8%).

Source : Office of National Statistics



NUMBER OF HOUSEHOLDS

> Between 2008-2033, the number of households in Bristol are predicted to increase by 46.7% from 184,000 to 270,000. This is higher than the 30% increase predicted for the Region, and the 21.1% increase predicted for England.



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, South Gloucestershire had the highest overall increase with 57%, and the lowest was Isles of Scilly with -10%. The 2nd lowest local authority was jointly Cotswold and Torbay with only a 5% increase over the same period.
> The increase in the City of Bristol was 18%, lower than the UK average. This was the lowest in West of England Counties.
> 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

PUT PEOPLE AND COMMUNITIES AT THE HEART OF WHAT WE DO

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 West of England are varied; rivers, tidal, surface water or combinations of the three, depending on location.
> There are areas within Bristol City where there is a risk of flooding. To see locations at risk of flooding in Bristol, please click here for the Environment Agency flood map.

Source: Environment Agency

PLANNING APPLICATIONS AND FLOOD RISK

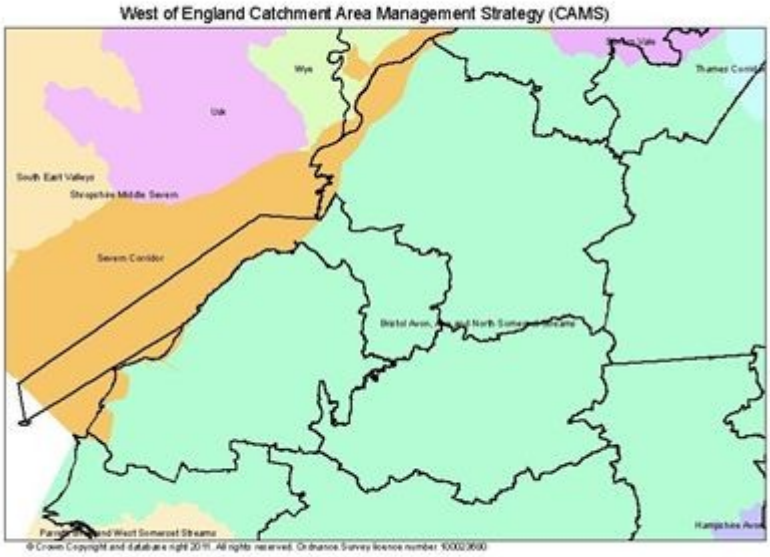
> The Environment Agency lodged objections to 6,200 planning applications in England and Wales on the grounds of flood risk in 2007/2008 up from 4,750 in 2006/2007. Of these, 1,160 objections were in the South West, accounting for almost 19% of the national total.
> An additional 21 applications for minor development were also approved contrary to Environment Agency advice in the South West. None of these was in Bristol.
> 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 BUSINESS AND THE PUBLIC SECTOR TO USE RESOURCES WISELY

WATER RESOURCES

> Bristol City is covered by the Bristol Avon, Axe and North Somerset Streams CAMS.



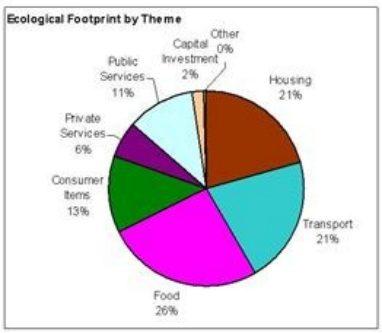
Please click here for the full documents.

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) calculate 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
> In 2006, Bristol City had the lowest Eco footprint in Avon with 4.52gha. This was also join fourth lowest in the South West Region with Gloucester. The highest in Avon was North Somerset with an eco footprint of 4.92gha.
> 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 3 planets worth of resources.

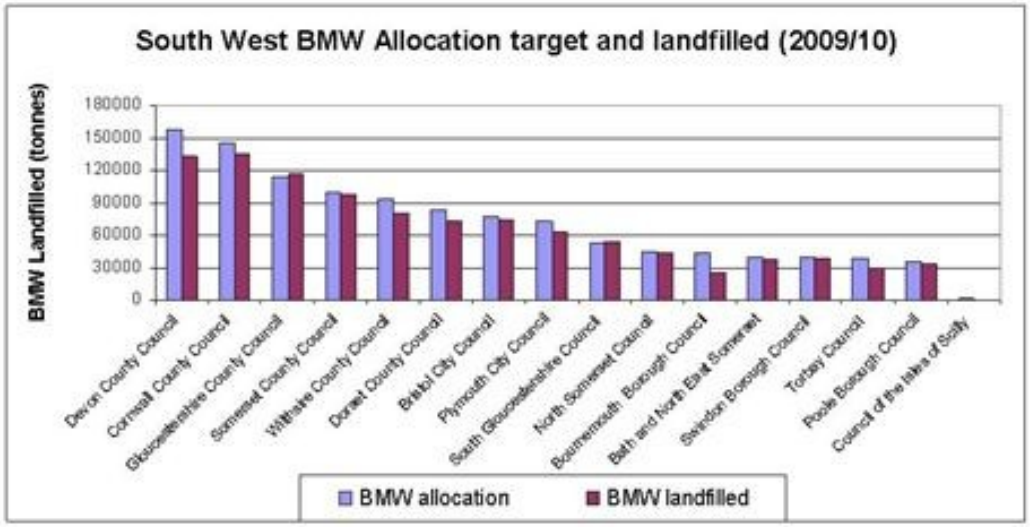
Bristol Ecological Footprint by Theme (2006)



Source: Resource Accounting

WORK WITH BUSINESS AND THE PUBLIC SECTOR TO USE RESOURCES WISELY

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 against their combined allocation of 1,134,910 tonnes.
> Bristol City Council had an allocation of 76,563 tonnes and only landfilled 74,337 tonnes (97%) 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