

Gloucestershire Airport **Common Misconceptions**

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1 Carbon Emissions

It is a well documented fact that the climate or weather has never been stable during the entire history of the earth and it is foolhardy to presume it will become or can be made stable in the future. Claims that it is down to human interaction have already been proven wrong due to the incorrect handling of physical data. When this error was exposed the scientists produced a new paper, purporting to produce similar results. But this too turned out to be an artefact of mistakes they had made – in this case, in their arithmetic!

There are more and more scientists, in particular many young scientists, who believe it to be a hoax, but are cautious of voicing their opinion so early on in their career. Bill Gray, one of the world's foremost hurricane experts believes that the American Government have been brainwashing people for 20 years. Starting with the nuclear winter and now with global warming, a cycle that runs its course every 15-20 years. He recalls a 1975 Newsweek article that whipped up another fear 'A coming Ice Age', where Climatologists were absolutely convinced that if political leaders did not act immediately it would be harder to cope with the grim reality! Of course this never actually happened, so the emphasis was switched from one extreme (ice age) to the other (global warming) (Gray, 2006). A common theme emerging from all this, is that the only inconvenient truth about global warming is that a genuine debate has never actually taken place. This is something that hundreds of scientists, many of them prominent in the field, agree with.

I'm certainly not denying that something can be done and globally we can all help by reducing waste and working towards a greener solution. As history has indeed shown us, aviation is and always has been, at the forefront of research and development. There has been more money invested, than any other industry, in developing a greener solution. Even though it is reported that aviation is the fastest growing source of carbon emissions, when put into context it is still some considerable way behind the levels produced by other sectors. In fact, even with the predicted levels of aviation activity in the future, it still falls well below the emissions caused by other industries, which realistically it will never actually catch up.

With regards to the actual future of Gloucestershire Airport, we all know, it is only a small minority that are opposed to the development, unfortunately however, they are the ones prepared to go public, despite the fact that support for our plans continues to grow. The general public's reaction has been overwhelming and extremely gratifying. The meetings we have attended (local parish and community) has given us the opportunity to dispel the media hype desperate to spark a reaction. This has proved to be extremely successful with the feedback received being positive. The continued support of the airport will ensure that the county remains in the national spotlight and further advance the county's growing reputation and attractiveness to major commercial investors. It has also been widely reported that a key factor in the decision process for businesses is a local airfield. The Business community has made it quite clear to us that they see the development of Gloucestershire Airport as being vital to the regions economic growth. It is absolute fact, that the emissions caused by the airport are minimal in comparison to local roads and industry.

I am fully aware that Tewkesbury Borough Council signed up to the Nottingham declaration which aims to target sectors that produce the greatest amount of carbon, although not aviation specifically.

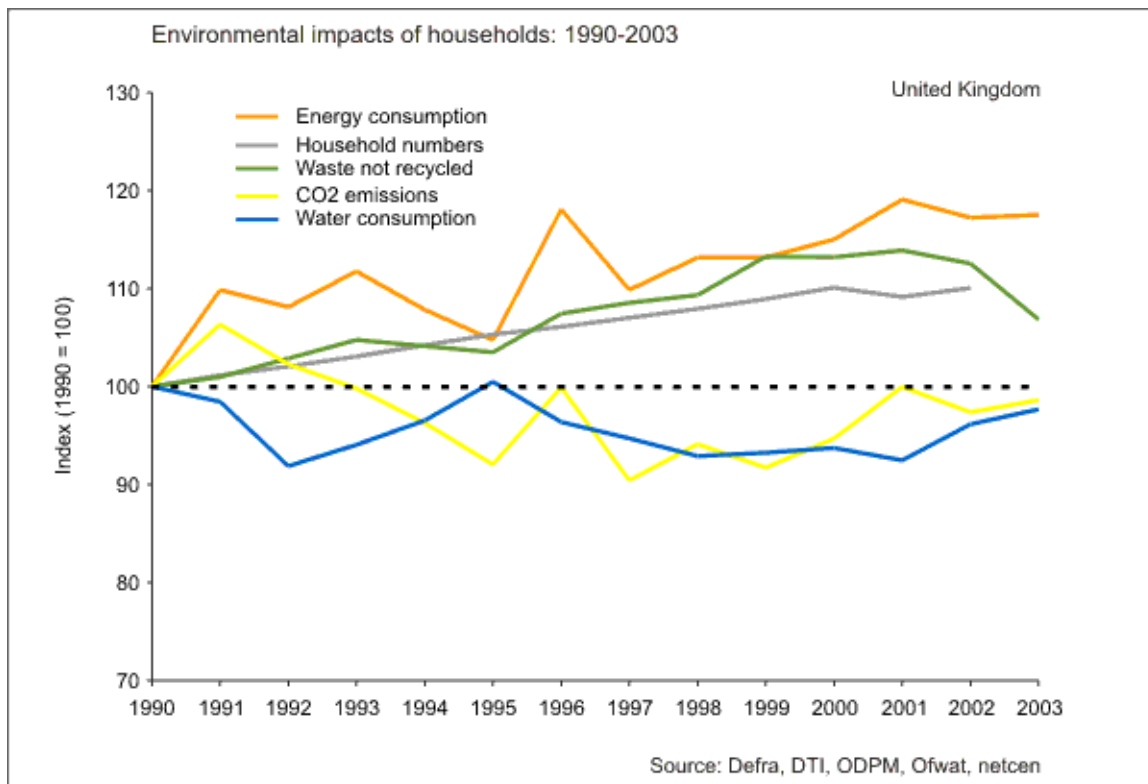
Therefore, anything we can do, i.e. introducing technology that enables aircraft to operate much more efficiently (ILS) can only be a good thing. The business segment we aim to attract will only arrive and depart, leaving a very small carbon footprint on the local community. Our current traffic patterns are based primarily on the smaller less environmentally friendly aircraft that fly in continuous circuits. I'm sure it does not take a scientist to realise that these plans can only be an improvement

Housing Development

A 450 acre site will accommodate a mix of approximately 11,250 Houses, Flats and Affordable Housing. This figure includes an allowance for 150% parking, roads and gardens.

Energy consumption in houses accounts for 30% of the UK's total energy consumption each year.

Between 1990 and 2002, household numbers rose by 10%. Between 1990 and 2003 household energy consumption (excluding transport use) rose by around 18%. Most of the energy consumed by households is for heating and hot water with the remainder for lighting, appliances and cooking. The increasing use of central heating and increasing number of appliances and computers in the home has broadly offset improvements in energy efficiency.



Over the same period domestic waste not recycled grew by 7%, roughly in line with household numbers until the latest year. Household water consumption (including leakage from water companies' pipes) fell by 8% 1995 and 2001, but has since been rising. (Defra, 2006)

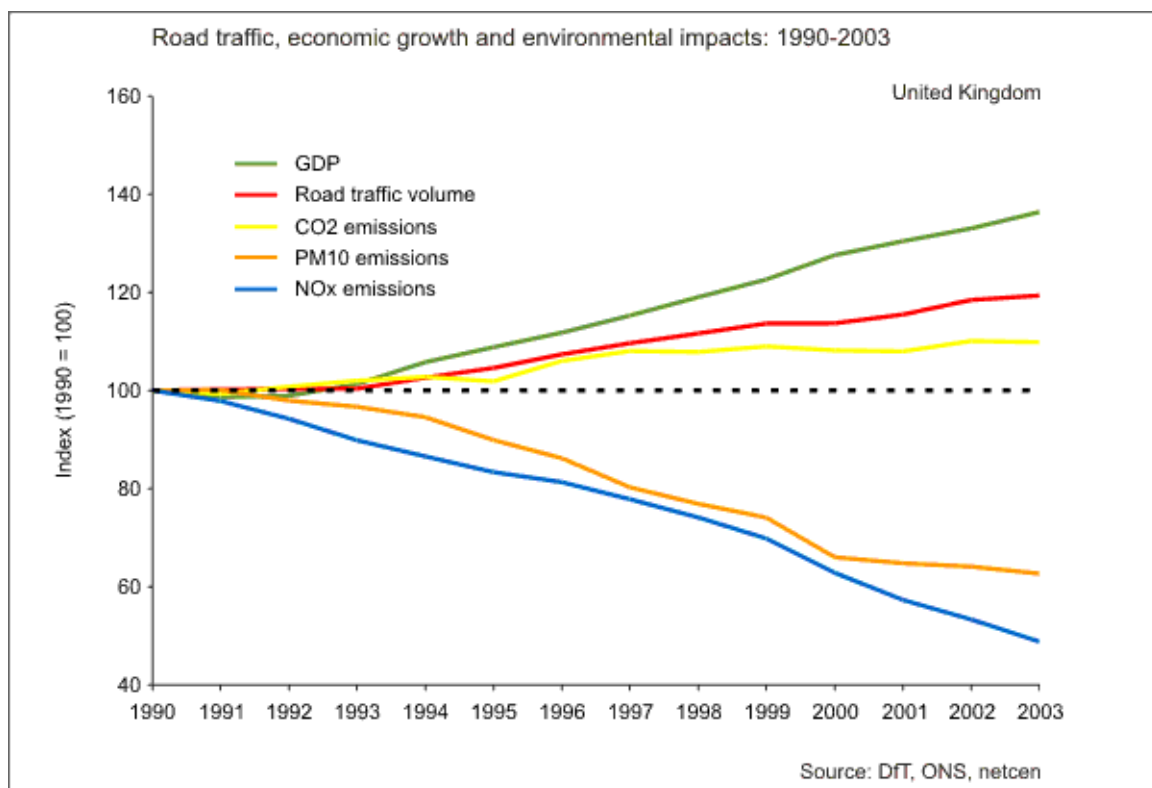
One-third of the water abstracted in England and Wales is consumed by households. Two-thirds of this drinking water is used to flush WCs, wash clothes or dishes and for bathing. Except when there are water shortages there is no expectation that households will conserve or re-cycle water. There is no consumer expectation or commitment from house builders to design homes in ways that conserve water (JRF, 2006)

Air quality in Gloucestershire

During 2004, all the pollutants complied with the Government targets. However, some targets were only just met. Nitrogen dioxide levels are close to the Government target at a few busy road junctions (Air Quality, 2004)

Vehicle Emissions

In both developed and rapidly industrialising countries, the major historic air pollution problem has typically been high levels of smoke and sulphur dioxide arising from the combustion of sulphur-containing fossil fuels such as coal for domestic and industrial purpose. The major threat to clean air is now posed by traffic emissions. Petrol and diesel-engine motor vehicles emit a wide variety of pollutants, principally carbon monoxide (CO), oxides of nitrogen (NO_x), volatile organic compounds (VOCs) and particulates (PM₁₀), which have an increasing impact on urban air quality (Air Quality UK, 2006).



Carbon monoxide (CO) is a toxic gas which is emitted into the atmosphere as a result of combustion processes, and is also formed by the oxidation of hydrocarbons and other organic compounds. In European urban areas, CO is produced almost entirely (90%) from road traffic emissions. The principal source of airborne PM₁₀ matter in European cities is road traffic emissions, particularly

from diesel vehicles. Nitrogen oxides are formed during high temperature combustion processes from the oxidation of nitrogen in the air or fuel. The principal source of nitrogen oxides - nitric oxide (NO) and nitrogen dioxide (NO₂), collectively known as NO_x - is road traffic, which is responsible for approximately half the emissions in Europe. NO and NO₂ concentrations are therefore greatest in urban areas where traffic is heaviest. Other important sources are power stations, heating plants and industrial processes. VOCs are released in vehicle exhaust gases either as unburned fuels or as combustion products, and are also emitted by the evaporation of solvents and motor fuels (Air Quality UK, 2006)

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).

Just under a third of all car mileage travelled each year is between home and work. Road transport is responsible for 91 per cent of carbon monoxide and 51 per cent of nitrogen dioxide in the UK. (Joseph Rowntree Foundation, 2005). This coupled with 29% of households owning two or more cars compared with 24 per cent ten years ago indicate that road emissions are steadily increasing (Census, 2001)

Between 1980 and 2004 energy use for transport increased by 62 per cent, mainly as a result of an 83 per cent increase in road traffic over the same period (DTI, 2006). Road transport is therefore a major source of carbon dioxide (CO₂) emissions and also of emissions of several air pollutants (DEFRA, 2006). In addition the major source of nitrogen oxides is also from transport with 47% arising from road transport. (SEPA, 2001)

The Key Pollutants

Pollutant	Main Source
Benzene	Petrol Vehicles
1,3-butadiene	Road transport
Carbon monoxide	Petrol vehicles, industry
Lead	Petrol vehicles, industry
Nitrogen dioxide	Road transport, power generation
Particles (PM10)	Road transport, power generation, industry
Sulphur dioxide	Power generation, industry

Source: Department of the Environment, Transport and the Regions (DETR) 1998

2 Expansion Plans

Gloucestershire Airport has no expansion plan. Work is planned to address long-standing safety issues with close-in obstacles and the runway end safety area to ensure the main runway complies

with the current Civil Aviation Authority safety regulations. These obstacles currently represent a hazard to aviation and public safety, and the airport is obliged by the Authority to work towards removing them. Completion of this work will **restore** around 160 metres of our **existing** usable runway length to provide an even safer environment for aircraft taking off and landing.

The runway is being lengthened

The plans propose laying only about 12 metres of additional paved surface. The existing runway is almost 1,420 metres, which is sufficient for all anticipated needs (and would be exceedingly difficult to increase, in any case).

The Airport is just a flying club

Businesses at Gloucestershire Airport include the headquarters of two of the largest commercial helicopter operators in the UK, an Air Traffic Control training college, the aeronautical engineering training centre for the City of Bristol College, eight commercial flying training schools, two business jet charter operators, a business jet engineering centre and a jet engine testing centre.

3 Economy

General Aviation contributes nothing to the economy

The General Aviation Small Aerodrome Research Project completed in 2006 shows that the General Aviation industry is worth £1.4 billion a year to the UK, provides 30,000 jobs and pays £815 million into the economy in wages alone. General Aviation represents 8% of the economic contribution of UK commercial aviation.

Why should we suffer so that the Airport can make more money?

With a proposed increase in annual dividends being paid to the Shareholders (Gloucester City and Cheltenham Borough Council's), the proposed developments will ultimately benefit the local communities.

The Airport is a waste of Council Tax payer's money

Gloucestershire Airport is a Limited Company, trading as a normal profit making business. Far from receiving Council Tax support, it actually contributes directly to the income of its Local Authority shareholders. It does this by paying both a proportion of its operational property rental income and an annual dividend. For example, in the last four years the Airport has contributed a total of over £124,000 in rental income and £160,000 in dividend payments. This principle applies equally to all ongoing business investment, which is financed entirely on the strength of the Company's business plans and at no cost to the Council Tax Payer.

4 Environmental Issues

The culvert will damage the local wildlife

A detailed ecological and wildlife constraints survey was carried out against our proposals. This, coupled with detailed and extensive cooperation with the Environment Agency, has resulted in a recommendation that the proposals will have a minimal impact to the environment. In fact, it has

been suggested that the improvements may well encourage wildlife and also provide additional benefit the local community.

5 Noise Issues

Jet and turboprop business aircraft are much noisier than light training and recreational aircraft

Popular light piston aircraft such as the Piper PA-28 and Cirrus SR22 are up to twice as noisy as business jets such as the Cessna Citation Encore. Helicopters are even noisier. Light aircraft also frequently fly circuits, which can mean over-flying the same places up to ten times in one hour, at relatively low height. Business jets or turboprops simply arrive and depart quickly using noise abatement routes and procedures. Noise complaints received by Gloucestershire Airport almost entirely result from light aircraft and helicopter circuit traffic.

The Airport will be quieter if the runway safety plans do not go ahead

For many years, Gloucestershire Airport has been one of the busiest airports in the United Kingdom and is likely to continue to be so. If the runway safety work does not take place, the landing distance on the main runway is likely to be reduced from the present 1,000 metres to around 870 metres. This will exclude the vast majority of low noise, efficient and high value business aircraft that benefit our local economy needs. However, light aircraft and helicopters are unaffected by this and will inevitably take the place of the lost business aircraft in increasing numbers. This will result in increased noise disturbance for local residents.

There will be 80-seat aircraft overhead up to 18 hours a day

There are currently few, if any, 80-seat regional aircraft that could operate Public Transport services from Gloucestershire Airport's runway, even when the safety work is completed. It is important to realise that the aircraft able to use Gloucestershire Airport will not be different from the ones we see now – they will just be less restricted in the passenger and fuel loads they can carry. Suggestions of 18 hours of operation a day imply that the airport will only be closed between midnight and 6 am. We can assure residents that that there are no plans to extend regular opening hours to very late evenings or early mornings.

There will be night flights

Gloucestershire Airport is a business airport, opening to suit business needs. Its published hours are between 8.30 am to 7.30 pm in the summer, and 6.30 pm in the winter. At weekends, reduced opening times apply. The airport sometimes opens, on request, outside these hours to facilitate an early morning or later evening arrival/departure. On rare occasions it opens during the night for a fixed-wing flight operated by the emergency services (usually for a medical flight). This has been the pattern of operation for over forty years. There are no plans to change it.

6 Pollution Concerns

The Airport adds to pollution and the greenhouse effect

The contribution of Gloucestershire Airport to local CO₂ emissions is negligible compared to that of motor vehicles on nearby roads (notably the M5 and A40), and local gas/electricity consumption. It also produces hugely less CO₂ than the alternative. Last year, aircraft using Gloucestershire Airport

consumed 2.1 million litres of fuel. This is equivalent to the fuel consumed on 650 yards of the adjacent part of the M5, 0.75 mile of the A40 to the South or just 2 miles of the Old Cheltenham Road alongside. It is also relevant that if the site were to be developed for housing, the additional road vehicles alone would consume at least 18 million litres of fuel annually, quite apart from domestic energy use.

The Airport is responsible for increasing pollution in the past 20 years

The number and type of flights from the airport have not changed significantly in the past 20 years and are not expected to rise in the future. Increasing local pollutant levels are therefore due entirely to other sources, notably the relentless rise in road traffic. Airport strategic plans aim to attract small high-tech business aircraft, which are more environmentally friendly in terms of noise and air pollution than the bulk of the current movements. We would therefore expect the level of pollution caused by local air traffic to actually fall over the next few years.

There will be an increase in aircraft movements

Total aircraft movements are not predicted to increase. (This figure stands at 80-90,000 per year, a figure that has not changed significantly for thirty years.) They could even decrease in the long-term. What we expect is a small shift in emphasis towards the quieter business aircraft. While we cannot promise an immediately noticeable reduction in noise disturbance, that can be expected to be the long-term result.

Pollution will increase

The number and type of flights from the airport have not changed significantly in the past 20 years and are not expected to rise in the future. Any increase in pollutant levels is therefore due entirely to other sources, notably the incessant rise in road traffic. Airport strategic plans aim to attract small high-tech business aircraft, which are more environmentally-friendly in terms of noise and air pollution than the bulk of the current movements. We would therefore expect the level of pollution caused by local air traffic to actually fall over the next few years.

CO2 Emissions will increase

The contribution of Gloucestershire Airport to local CO2 emissions is negligible compared to that of motor vehicles on nearby roads (notably the M5 and A40), and local gas/electricity consumption. It is also relevant that CO2 from the airport is hugely less than the alternative.

Last year, aircraft using Gloucestershire Airport consumed 2.1 million litres of fuel. If the site were to be developed for housing, the additional road vehicles would consume at least 18 million litres of fuel annually, quite apart from domestic energy use. For this reason alone, the future of the airport and the protection it affords the greenbelt are worthy of the support given by the South West of England Regional Spatial Strategy.

7 Community Concerns

The value of our homes will decrease

Because aircraft movements and noise disturbance are not expected to increase, you can be confident that there will be no devaluation of any property in the local area. On the contrary, experience shows that the economic contribution of a successful airport tends to increase local property values.

Gloucestershire Airport will compete with Bristol and Birmingham

The proposed safety improvements will do a little towards restoring lost landing distance suffered in the past. It will do no more than this. Our Civil Aviation Authority Code 2 runway classification can never result in a landing distance exceeding 1,199 metres. Airbus and Boeing type aircraft operated by the popular passenger airlines need in excess of 1,800 metres. News items suggesting that Gloucestershire Airport will compete with Bristol or Birmingham are figments of their writers' imaginations. Thirty-five years ago, local people enjoyed regular, scheduled passenger services from Gloucestershire Airport in small regional airliners of the day, such as the Vickers Viscount and Handley Page Herald. These flew to destinations such as Dublin, Isle of Man and The Channel Islands. Sadly, with the loss of our usable runway, this is no longer possible. The work we propose will 'turn back the clock', making operation possible for some of the modern (and much quieter, incidentally) turboprop equivalents such as the ATR42 or Dash 8.

Expansion

No expansion plan is in place for the airport. Work is planned to address long-standing safety issues with close-in obstacles and the runway end safety area to ensure the main runway complies with the current Civil Aviation Authority safety regulations. These obstacles currently represent a hazard to aviation and public safety, and the airport is obliged by the Authority to work towards removing them. Completion of this work will restore around 160 metres of our existing usable runway length to provide an even safer environment for aircraft taking off and landing.

Planes will be flying even lower over our houses

Aircraft using the ILS will continue to fly a 3.5° degree glidepath, as currently exists. The subtle, yet significant difference is that, by virtue of the vertical guidance the system provides, the descent profile that the pilot follows will be far more accurate. In terms of height, I can categorically state that aircraft will not fly lower than they presently do. Currently, our approaches have a 'stepped down' profile. These are heights which an aircraft cannot descend below at certain ranges from the Airport. The aircraft sometimes descend to the heights then fly level until the next descent point, resulting in frequent power changes and, therefore, more noise. With ILS, however, the aircraft reaches a fixed point, normally 5.5 miles from the Airport, then begin a steady descent to the runway. The more modern business aircraft that we hope to attract go one stage further. Their onboard Flight Management Systems analyse the wind data and determine the optimum point at which to begin that descent, often linked to the autopilot systems. The purpose of this is to ensure that the most fuel efficient profile is achieved. By happy coincidence, this means the approach is also quieter. If the traffic conditions permit, the aircraft can be cleared for a continuous descent approach and the onboard equipment will close the throttles at the appropriate moment, trading the aircraft's height and inertia for speed, delivering it at the landing point with minimal power adjustments. That said, of course, the ILS will also be used for training. By their very nature, training pilots will take some practice to develop the skills and learn the techniques for using the

equipment. We don't wish to create the impression that *all* aircraft will glide silently and serenely down this beam in the sky, but the larger jets often will.

Blenheim House is a Character Building that would be lost

Blenheim House but it must be considered against the potential safety issue. 67 metres beyond the Western end of the runway, the land falls away sharply to Norman's Brook. Beyond this lies the property of Blenheim House. The current Runway End Safety Area (RESA) for runway 27 is limited to 90 metres (instead of the CAA recommended 120 metres), and this is achieved only by designating otherwise usable runway surface as part of the RESA. The runway therefore has a minimum length RESA, which terminates in a sharp drop to the brook – a far from ideal situation for an overrunning aircraft to encounter.

Flights will increase if the plans are approved

Based upon empirical data and reports from similar airfields around the country, it is predicted that movements would not to increase from our current level of activity. (This figure stands at 80-90,000 per year, a figure that has not changed significantly for thirty years.) They could even decrease in the long-term. What we expect is a small shift in emphasis towards the quieter business aircraft.

ILS will allow aircraft to fly lower over our houses

ILS is classified as a precision approach aid because it provides both lateral and descent path guidance to the pilots. It is highly accurate and works in the VHF and UHF radio bands. These bands are not susceptible to weather or terrain interference. ILS also does not depend on a ground controller having to guide each aircraft in turn, so a dedicated speech radio channel is not required and aircraft can be brought in to land much more efficiently. The provision of ILS must now be regarded as a necessity for airports offering pilot training.