

An assessment of the state of the UK's infrastructure by the Institution of Civil Engineers

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The Institution of Civil Engineers (ICE) is one of the most important sources of professional expertise in road and rail transport, water supply and treatment, flood management, waste and energy. Established in 1818, it has over 75,000 members throughout the world – including over 60,000 in the UK.

The 2005 ICE State of the Nation report will be launched on Tuesday 18 October. This annual examination of the UK's infrastructure is compiled each year by a panel of experts drawn from the various fields of expertise across ICE's membership.

This year, six regional versions of the State of the Nation report – covering Northern Ireland,

Scotland, Wales as well as the North West, South West and West Midlands of England – are being produced, in conjunction with the UK-wide publication.

The State of the Nation report is an opportunity for politicians and the public to join the debate about the future of the UK's infrastructure.

Civil engineers are thinking radically about the future of infrastructure, such as turning residual waste into energy and the introduction of road user pricing. The window of opportunity to effect remedies, repairs and renewals is rapidly closing, if society is not to suffer. Some of the key findings of this year's report include:

Transport

Transport has made little

improvement this year, since the quiet demise of the "Ten Year Transport Plan". Sustainable transport may have become better understood, but while the feelings of guilt and worry amongst the public may have increased, spending and decision-making by government has not.

Rail: Network Rail should be commended on the 16% reduction in delays due to infrastructure repairs and maintenance, but its reported underspend in 2004/2005 by about £800 million is worrying.

Roads: Congestion continues to be a major concern of road users in towns and cities across the UK, with delays occurring due to accidents and road works still causing the most frustration. The situation is unlikely to change while car journeys continue to rise and local roads across the UK need maintenance. Journeys on roads are increasing and congestion has to be tackled to create shorter journey times. It is time that a national debate on road charging begins in earnest.

Local Transport: Travellers have to be persuaded that their journey by public transport will be comfortable, affordable and seamless to shift away from our car-first culture. The report supports the encouragement being given to Passenger Transport Executives to improve the safety and security of local transport services, and the important part that integrated local transport is playing in Regional Spatial Strategies.



Sellafield, BNFL

Aviation: The last 12 months have seen air travel from UK airports continue its climb back to levels before 9/11. The steep growth is adding to the pressure for more runway capacity in all parts of the country but most immediately in the South East. Delivery of road and rail access infrastructure has continued to be hampered by funding and programming delays, threatening efforts to achieve a shift by passengers and airport employees onto public transport.

Seaports: British seaports are as essential to the national economy today as they have always been. 97% of the goods that enter and leave the country do so by sea. The current lack of deep-sea container ports in the UK is already forcing trade to northern Europe, making the goods we buy more expensive. We must start to regard planned new ports as parts of a national network moving goods in and out of the country and not purely as separate commercial entities without any effect beyond their immediate area. Concentrated in the south east, the new major ports will put enormous extra strain on the region's road and rail networks.

Water & Wastewater

The water we drink in the UK has never been cleaner or safer. But it is also becoming scarcer. Our water supply is being put under pressure by factors ranging from climate change, low rainfall and ageing delivery structure, to changes in the population, urban population growth and the increasing use of appliances such as power showers. The job of renewing the distribution network could take at least 200 years, even at today's unprecedented rate of investment.

Energy

Another year has gone by without any significant new generating capacity being built. Upgrades to the electricity transmission and distribution networks are taking place at a slow pace. As the UK becomes more dependent on imported gas, the prospect of the nation losing control of its energy supply, and with it a grip on prices and carbon emissions looms ever



Wastewater Treatment Facility, Bury, Greater Manchester, United Utilities/MHW

larger. The only real alternative is to invest very soon in a mixed range of domestic fuel sources, in which nuclear, clean coal and renewable power sources each play a significant part.

Flood Management

The total investment in flood management has increased significantly year-on-year, reaching around £560 million in 2004/2005. The target of providing improved protection to 80,000 properties in the three years up to the end of 2005/2006 is in sight. However, this still leaves many thousands more at significant risk.

Recognising the seriousness of the issue, the Government has invested heavily in recent years to repair and improve flood defences, widen coverage of flood warning schemes and produce new flood maps.

Waste

In this country, waste is seen as an end – a dead end – rather than a means. That view has to change. Waste is an energy resource, and at a time when the UK's own existing sources of energy are dimming, it could help fill the fuel gap, just as it is doing in other European states. National and local government need to assess the technical and economic scope for reprocessing and treatment facilities, and opportunities for communities and businesses to make best use of the resources these facilities produce.

Communities for the future

Affordability of housing continues to be a concern. In 1995, the average house price was three times the average annual salary. 10 years later, it is five-and-a-half times the average salary and out of the reach of most key workers. The Government's competition, as part of its Homes For All strategy, to design and build "the £60,000 house" is a step in the right direction, as is the decision to allow rural local authorities to set aside land purely for affordable housing to meet local needs.

Sustainability and the environment

A few more admirable initiatives, sound strategies and good intentions – that is as far as progress on sustainability has gone in 2004/2005. Although measures to put sustainability policies into practice are being felt, there has not been much evidence of individual change at the level of individuals, communities and businesses. Changes to financial incentives can help, but there are obstacles barring progress that can only be broken down if everyone understands that they must play a part in protecting our health, quality of life and prosperity. The UK must overcome the "why bother" mindset to put sustainability at the heart of our infrastructure decisions.

The report can be viewed and downloaded at: www.uk-infrastructure.org.uk

For more information about ICE or the report, you can contact the ICE External Relations team on 0207 665 2151